

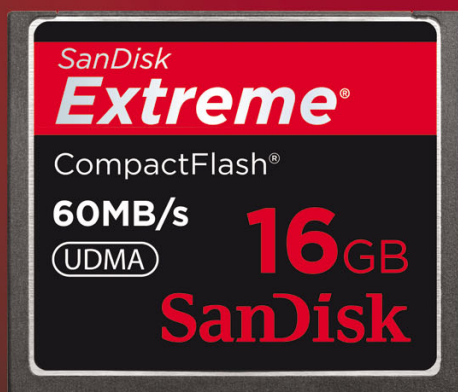
FirstGlimpseMag.com

FirstGlimpse®

HOME THEATER: pages 8 to 26

 Mitsubishi's Diamond 249
Series LCD HDTVs p. 17

 GAMING, MEDIA & MORE: pages 73 to 80
Livescribe's
Pulse Smartpen p. 73

 DIGITAL IMAGING: pages 27 to 41
SanDisk's Memory Cards p. 27

 PORTABLE DEVICES: pages 61 to 72
FLO TV Personal Television p. 61

Since 1979, Sandhills Publishing has produced publications covering technology beginning with the introduction of *Processor*. Over the years, the company has developed a complete line of computing publications, encompassing *Smart Computing*, *PC Today*, *Computer Power User*, and *First Glimpse*. Our plain-english approach has served audiences well for 30 years, ensuring they receive accurate and unbiased technology information to meet their needs.



FirstGlimpse®

Table Of Contents • Volume 7 Issue 1

On Our Cover: Featured on this month's cover is Mitsubishi's Diamond 249 Series LCD HDTV (LT-46249 and LT-52249 models, \$2,599 and \$3,099, respectively; www.mitsubishi-tv.com), SanDisk's Extreme CompactFlash Card (8GB and 16GB, \$145.99 and \$246.99, respectively; www.sandisk.com), FLO TV™ Personal Television (www.flotv.com), and Livescribe's Pulse smartpen (2GB and 4GB models, \$149.95 and \$199.95, respectively; www.livescribe.com).



17



61



27



73

Get Details On The Latest Product Arrivals

COREL Corel Digital Studio 2010
■ See page 48

EPSON EXCEED YOUR VISION
Epson WorkForce 610 All-In-One Printer
■ See page 45

FLO TV FLO TV Personal Television
■ See page 61

livescribe Livescribe Pulse Smartpen
■ See page 73

Microsoft Microsoft Office 2007
■ See page 58

Microsoft Wireless Comfort Desktop 5000
■ See page 43

ROXIO Roxio Easy VHS To DVD
■ See page 50

SanDisk SanDisk Extreme CompactFlash Memory Cards
■ See page 27

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The Connected Home

Discover New Possibilities With Today's Technology

TODAY A WIDE VARIETY of digital devices and technologies work together to make all kinds of information available whenever and wherever you need it. Stream movies to your home theater; download photos from a relative overseas to a photo frame in your living room; or upload music from your MP3 player to your car. Whatever you want to do, there's a product out there to help you do it. Use this digital home blueprint to identify the types of things you want to do, and then go to the appropriate pages to learn about related products and technologies.

81 Glimpse Around The Corner
D-SLRs That Can Record HD Video

67 Video On The Go
Watch Whenever & Wherever

8 TV Technology Breakdown
Sort Between LEDs, LCDs, RPTVs & Plasmas

18 How To Buy A Universal Remote Control
Simplify Your Home Theater

Inside This Issue

Home Theater pages 8 to 26

Digital Imaging pages 27 to 41

Computers pages 42 to 60

Portable Devices pages 61 to 72

Gaming, Media & More pages 73 to 80

This Month's Lifestyle Close-up:

The Best In HT Entertainment pages 8 to 16

**28 How To Buy A
Digital Photo Frame**
Show Off Your
Favorite Images

74 How To Buy An eReader
Keep A Library On The Go

68 Essential Things To Know
Car Speakers

52 Essential Things To Know
Computer Monitors

42 How To Buy A Router
The Key To Your
Home Network

ce news

COMPILED BY ANDREW LEIBMAN

Room For More Digital In Your Living Room?

According to In-Stat, a new class of devices is making its way into your living room: DMAs (Digital Media Adapters), DMPs (Digital Media Players), and DMRs (Digital Media Receivers). The key word here is digital, and all three product types make it their business to deliver Internet and digital storage access to otherwise traditional audio players, TVs, PCs, and more. In-Stat found that more than 40 companies are offering products in these categories, and, all told, approximately 4.5 million DMAs, DMPs, and DMRs are expected to be sold worldwide in 2013. In-Stat also found that more than 50% of U.S. household home network users are interested in purchasing these kinds of devices.



We Love Mobile Content, If We Can Find It

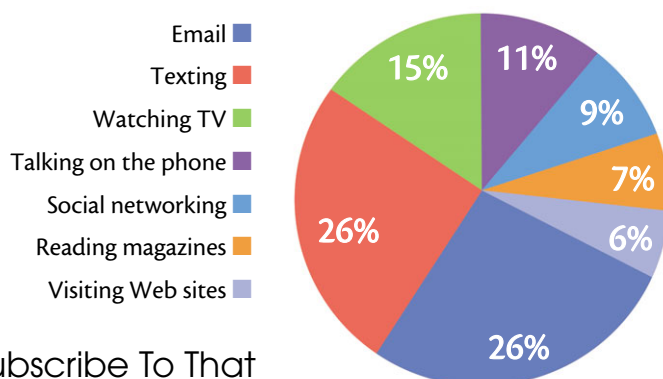
According to Qualcomm's Xiam Technologies subsidiary, although a majority of smartphone users find their phone's search capabilities lacking, these same users reported they would be willing to spend more time accessing and purchasing content as long as it's easy to get to. The study also determined that mobile phone users in the United States put a lot of stock in email and QWERTY keyboard features, compared to UK mobile phone users, who favor the looks of phones and their entertainment capabilities.



Gen Y Is Partial To Email, Texting

According to a study from the Participatory Marketing Network and Pace University's Lubin School of Business' Interactive & Direct Marketing Lab, Generation Yers (Americans born between 1977 and 2002) value their time spent on emails and texts over that spent on social networking sites. The study asked Gen Y consumers which activity they would least like to give up for a week: visiting social networks, reading/writing emails, texting, talking on the phone, watching TV, reading magazines, or browsing the Web on sites that are not for social networking. Emailing and texting won out, with each receiving 26% of the vote, followed by TV (15%), talking on the phone (11%), visiting social networking sites (9%), reading magazines (7%), and visiting sites not for social networking (6%).

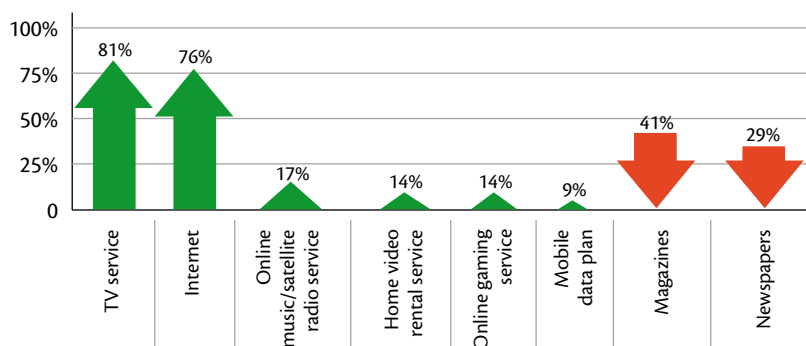
Activities Generation Y Can't Go Without



I'll Subscribe To That

According to The NPD Group's Entertainment Trends in America study, we're fond of our CE-enabled entertainment subscriptions. The study found that for 2009, overall monthly entertainment-content subscription spending climbed to \$115 per person, which is up almost 7% since 2008. Subscriptions that saw growth include TV service, Internet, online music service or satellite radio, online gaming service, mobile data subscriptions, and home-video subscription service. And traditional media subscription services, such as newspapers and magazines, both experienced drops in 2009 compared to 2008.

What Entertainment Services Do U.S. Consumers Subscribe To?



FirstGlimpse

tidbits

As 2009 came to a close, global PC shipments were expected to rise by 2.8%, which was in stark contrast to the 11.9% decline predicted for PC shipments at the outset of the year. While desktop PC shipments were expected to be down 9%, mobile PCs were expected to surpass 162 million units last year, which was a 15.4% increase compared to 2008.

Source: Gartner

According to the latest College Explorer survey, university students in the United States were expected to spend \$6.5 billion on technology in 2009. The survey also found that they view/listen to/engage in some form of media for roughly 12 hours every day.

Source: Alloy Media + Marketing & Harris Interactive

Remember that digital-to-analog converter box coupon program? A new report finds that almost 45 million of the devices were shipped to stores since the beginning of the coupon program (January 2008) through the first half of 2009. In the second quarter of 2009 alone, almost 7 million converters shipped.

Source: Digital Tech Consulting

Black Friday 2009 was a good day for consumer electronics stores and online retailers. Online Black Friday sales raked in \$595 million in 2009 compared to \$534 million in 2008, which represents an 11% improvement. As far as popular products, TVs, digital cameras, and Blu-ray players were the must-haves of the season.

Source: Consumer Electronics Association, ChannelForce & comScore



TV Technology Breakdown

Sort Between LEDs,
LCDs, RPTVs & Plasmas

HDTV SHOPPING CAN BE (NEARLY) AS EXCITING AS GOING OUT TO BUY A NEW CAR. But the similarities don't end there: If you don't do some research before you shop, you might feel a little overwhelmed by all the choices.

Even worse, you might wind up with a model that isn't a good fit for your lifestyle. A mother of two might regret buying a Volkswagen New Beetle with a tiny backseat, for example. We wouldn't want you to feel similar remorse over your HDTV purchase. Bear with us as we explain what makes them tick, because one type of TV display technology may suit your lifestyle better than others.

Keep in mind there are good and not-so-good examples of each type of HDTV. In other words, don't let an entry-level model sour you on all plasmas or all LCDs, for instance. Also, some former issues, such as the potential for burn-in associated with early plasmas, have largely been solved by this point.

BY MARTY SEMS



A plasma's screen contains up to 2 million tiny cells filled with gases such as neon and xenon. When electrically excited to a plasma state, the gas causes a colored phosphor coating to glow.

The result is a rich video image with pixels that can turn on and off very quickly. Sports fans will love the way a plasma keeps up with fast-paced games without motion blur.

Plasmas have wider viewing angles than most LCDs or RPTVs (rear-projection TVs), meaning their screens seem to have the same brightness and color from any vantage point in the room. Also, plasmas tend to have more even lighting than most types of LCDs.

Movie buffs will appreciate the deep, rich black levels made possible by most plasmas' high contrast ratios. Because this effect is most visible in the dark—not to mention the fact that a plasma's picture may seem a little dim under bright conditions—this type of HDTV is a solid choice for a basement or windowless media room.



A traditional LCD has internal CCFLs (cold cathode fluorescent lamps) along the edges of its screen. A rear panel reflects the light out the front of the display through a matrix of colored slits. A thin layer of electrically responsive, liquid crystal gel mostly blocks the light for dark parts of the picture and also determines which colors get through.

Budget-minded shoppers will like the fact that most LCDs draw less power than a plasma of the same screen size. They also emit less heat into the room. Both of these traits translate into lower electricity bills, especially in summer.

A good LCD is ideal for viewing in a room with windows, as most of them have brighter pictures than plasmas. A well-lit room also minimizes a plasma's advantage over a traditional LCD in contrast ratio.

LCD is also the only HDTV technology to offer a highly detailed 1080p picture, such as for Blu-ray Disc viewing, on a small- to medium-sized screen. On the other hand, LCDs can be pricy in larger sizes. Better models use antijudder technologies and refresh rates of 120Hz or higher to keep movies from looking jumpy.



As the term LED TV is used today, it means an LCD with backlighting from LEDs (light-emitting diodes) instead of CCFLs. An edge-lit model replaces the CCFLs along the edges of the screen with LEDs, whereas a matrix set replaces an LCD's reflective back panel with a full array of LEDs for more even lighting. We're not talking about OLED (organic LED) TVs, though, which to date are still in their infancy.

LED LCDs combine many of the best attributes of plasmas and LCDs but typically require much less energy than either. If you're going "green," this is the TV for you.

Many LED TVs look outstanding even in a bright room, thanks to high light output levels and wide color gamuts. Viewing angles are almost as good as plasmas', too.

Matrix LED TVs use a technique called local dimming to turn down or shut off LEDs behind dark parts of the picture. This increases contrast and enhances details, especially for viewers who prefer to watch television in the dark.

On the other hand, LED LCDs are expensive, especially in larger sizes. If you're willing to spend a little more now to save a lot on your electricity bills later, an LED LCD is your ticket.



Rear-projection TVs bounce bright lamp or laser light onto a large screen. The most common type, DLP (Digital Light Processing), uses a spinning color wheel and a chip with millions of tiny moving mirrors to create a picture.

DLP continues to sell because it supplies a large screen size at a relatively low price. Moreover, several DLP sets are compatible with 3D technologies being proposed for home-theater use. Image quality can be decent and motion can be fluid, depending on the model.

However, RPTVs aren't flat-panels; the thinnest models are about a foot deep. Some have pictures that change considerably depending on where you're sitting. Finally, most owners should be prepared to replace burned-out bulbs every few years.

A/V Receiver Advantages

Surround-Sound Audio Starts Here

AN A/V RECEIVER IS THE KEY to delivering movie-theater-like surround sound because it routes dialogue, music, and directional effects to the speakers. Here, we'll discuss how your home-theater experience can benefit from an A/V receiver.

■ Breaking The Surround Cipher

When a movie or TV show is mixed for surround sound, it's encoded in a sound format, such as Dolby Digital or DTS (Digital Theater Systems). Within each audio format, there are a number of variations, such as Dolby Digital Plus or DTS-ES; the newest formats include Dolby TrueHD and DTS HD Master Audio, which let you enjoy surround-sound audio that's identical to the master soundtrack from new high-definition sources, such as BD (Blu-ray Disc).

In Respect To A/V Receivers

- These decode surround-sound formats to provide you with movie-theater-quality audio and amplify your home-theater speakers' volume to adequately fill a room.
- Digital signal processing lets you experience surround sound from 2-channel stereo audio sources.
- You can manage all of your home-theater audio and video in one device.

An A/V receiver is designed to decode the wide spectrum of available audio formats and translate it into surround sound. So no matter what format a TV show, DVD, BD, or video was recorded in, your home theater will be able to reproduce it to sound the way the original audio engineer intended.

■ Amplification

On the product tag, an A/V receiver will list the speaker configuration it supports, such as 2.0 (stereo—not true surround sound), 5.1, 7.1, or 7.2. The first number indicates the maximum number of speakers it can deliver sound to and second number shows how many subwoofers (a component designed to deliver only deep bass sound) you can connect. The receiver will, at least, need to match your current speaker configuration. If you plan on eventually upgrading to a larger configuration, such as 7.1 or 7.2, you should select a receiver that can handle it.

When an A/V receiver sends audio signals to a home-theater speaker setup, it will boost the music and dialogue of the program you're watching to volumes that are loud enough to fill the room with lifelike surround sound. To compare an A/V receiver's ability to amplify sound, check out the per-channel rating listed on the product tag. For the average room, 100W per channel should



be enough for crystal-clear surround sound to all spaces in the room.

■ Signal Processing

Not every show you watch will be recorded in surround sound, but an A/V receiver's digital signal processing capabilities can inspect the audio and route the simulated surround sound to all your home-theater speakers.

Additionally, you can select special sound environments, such as a large hall, jazz club, arena, or video game, to make the audio sound as though it's been recorded in a different atmosphere. If you want to re-live a concert you went to but only have a band's studio album, you can adjust an A/V receiver's settings to simulate the live environment where you saw the band firsthand.

■ One Point Of Control

An A/V receiver also features video inputs and outputs for your home-theater components, such as HDMI, Component, and Composite. And with the included remote control, the receiver will let you switch what you're watching on your TV or listening to in your home-theater room at the press of one button—rather than switching among a pile of remotes. **FG**

BY NATHAN LAKE

FirstGlimpse

Put Together Great Sound

Choose Between HTB & DIY

IT'S TIME TO PULL YOUR ENTERTAINMENT OUT INTO THE ROOM. You may already be enjoying a big-screen, high-definition experience in your home theater, but it may feel a little flat if the only audio you hear is coming out of your HDTV.

A surround-sound system adds dimension to your movies, TV shows, and sportscasts. Satellite speakers envelop you in audio from all sides. A center speaker near the TV ensures that you'll catch more dialogue from your movies. Meanwhile, a subwoofer on the floor lends gravitas to stringed instruments and adds impact to explosions. Tying it all together is a receiver, an intelligent amplifier that processes incoming audio and routes it to each speaker.

There are two roads to a multichannel audio

setup (includes multiple speakers). You can buy a kit with most of the parts you'll need or assemble a system with individual components you choose yourself.

■ Home Theater In A Box

An HTB comes with prematched parts to make your audio system shopping a little easier. It's the best choice for users

cables, and perhaps other items such as a DVD or BD player. A 7.1-channel set comes with a couple of extra satellite speakers for more precise sound direction with compatible movie discs.

For setup, connect the included cables between the speakers and the receiver according to the HTB's instructions. You will probably need to buy a cable to ferry digital audio from your disc player into the receiver. For best results, buy an HDMI cable for this task, plus another to carry video from the receiver to your HDTV.

■ Components à la Carte

With just a bit more research, you can buy a home-theater receiver and speakers separately. It's no more difficult to set up a custom assemblage of surround-sound components than an HTB, so don't be afraid to take this route.

Buying parts individually is the one way to ensure that your multi-channel audio system has the sound and the features you're looking for. For example, you might find that you prefer the tone of one manufacturer's speakers, but the features of a receiver from another vendor. Also, if you're upgrading from an older surround-sound set, you may want to reuse the speakers you already own and just buy a new receiver decked out with current home-theater technologies such as HDMI and high-def audio format support.

Follow our guidelines above when setting up your custom sound system. There's just one difference: Be sure to set your receiver's speaker impedance to match the satellite speakers' ohms rating (such as Ω) or size (small/large). **FG**

BY MARTY SEMS

Avenues To Audio

- A 5.1- or 7.1-channel system has five or seven speakers, respectively, plus one subwoofer.
- An HTB comes with an audio receiver, speakers, speaker cables, and perhaps extras such as a DVD or BD player.
- Alternatively, you can buy these parts separately to get exactly what you want.



who want to spend less time researching and more time enjoying their new sound systems.

A 5.1-channel HTB is most common; it includes five satellite speakers and a subwoofer, along with a receiver, speaker

Choose Your Disc Player

Upconverting DVD Players vs. BD Players



IF YOU LOVE MOVIES, then you've probably amassed a decent collection of DVDs. However, the picture quality will not be very impressive on your high-resolution HDTV if you're using a standard-definition player to watch them. In order to enjoy your DVDs as they were originally intended to be viewed (or even better), you'll need to switch to an upscaling device, such as an upconverting DVD or Blu-ray Disc player.

Upconverting DVD Player

■ How It Works:

The process of upconversion involves enlarging a DVD's 480p video resolution to the video resolutions supported by an HDTV—720i, 720p, 1080i, or 1080p—which will result in sharper, more lifelike video. However, you'll definitely want to make sure your upconverting DVD player has at least one HDMI port, so you can experience the best video quality possible.

■ The Benefits:

- The latest upconverting DVD players are compatible with multiple playback formats, so you can view DVD slideshows during your family reunion, enjoy your favorite high-energy action movies, or review a video presentation you created on your laptop. Because you'll be able to convert so many formats to a better picture quality, you'll have the opportunity to watch the best definition possible.
- A player with progressive-scan technology reorients the frames in the video image to produce a more complete picture.
- Comparatively, upconverting DVD players can be less expensive than BD players, and they can play the DVDs you already own in a higher definition.

■ Perfect For:

Anyone who owns a large collection of DVDs and wants to upscale to a better video definition.

Blu-ray Disc Player

■ How It Works

If you're looking for high-definition playback that features a video resolution that is five times better than what standard DVDs have to offer, a BD player is your ideal choice. For the best results, use HDMI to connect your BD player to your TV.

■ Benefits:

- BD players will not only play BDs, but they can also access extra content, such as trailers and bonus material, that's available on BD-Live discs via an Internet connection.
- BD players can upconvert your DVDs from 480p standard definition to 720i, 720p, 1080i, and 1080p high definition.
- If you prefer to watch Internet videos or stream on-demand movies with your family, instant content is available on Internet-connected BD players. Some models also feature a small amount of built-in memory so that you can save your favorite online videos or BD-Live content.
- A BD player will natively display a BD resolution at the best possible clarity.
- The audio format decoding incorporated into BD players is superior to what DVD players have to offer.
- If you have a wireless home network, you can stream videos, music, photos, and more using a BD player that is Wi-Fi compatible to your HDTV.

■ Perfect For:

Anyone who appreciates the highest quality video when they're watching movies on their HDTV.

BY JOANNA SAFFORD

FirstGlimpse

Create A Stylish & Spacious Home Theater

Choose An HDTV Mount

PAIRING YOUR HDTV WITH THE RIGHT MOUNT will not only add style to your home theater but also offer extra living space. Here you can learn about the several types of mounts available and determine whether mounting your HDTV is the right choice for you.

■ The Benefits

To determine whether mounting your HDTV is the right choice, consider all of the benefits a mount can offer. For starters, many wall mounts can be

adjusted to fit the best viewing angle for large groups of people. Rather than rearranging the furniture to accommodate your sports-fanatic friends and family on game day, simply adjust the wall mount to point toward the viewing area.

Low-profile mounts attach nearly flush against the wall, perfect for smaller home theaters where there's not enough room to place your HDTV on the floor. Low-profile mounts are positioned at a fixed height, so they're ideal for rooms with seats that are all within view of the screen.

HDTV Mount Facts

- HDTV mounts will give your home theater a more stylish, modern look.
- Full-motion mounts can be pointed to face any direction in a room to achieve the best viewing angle.
- Tilting mounts angle up and down to help reduce the amount of glare on your TV screen.
- Low-profile mounts are the simplest form of mount, ideal for home theaters where every seat has the best viewing angle.

Mounting your HDTV will also free up some room in your home theater, so you can add extra seating and create a more aesthetically pleasing space by eliminating excess clutter.

■ Types Of Mounts

There are three main types of mounts available: full-motion, tilting, and low-profile.

Full-motion mounts can extend, retract, tilt, and swivel, giving you the power to point your TV toward a viewer sitting almost anywhere in a room.

A tilting mount can angle up or down, helping to reduce glare on your HDTV's screen in rooms with a lot of sunlight and can often prevent neck strain when you want to join the kids on the floor while they watch their favorite movies.

In addition to mounting your HDTV, you can also mount home-theater components such as your disc player, stereo system, and other components. A wall mount shelf system typically attaches to the wall below your HDTV, creating a sleek floating appearance.

■ Make Installation A Breeze

Installing a mount is different based on your HDTV's size and weight. Mount installation also requires special tools and knowledge of wall construction, so you should consider hiring a professional to handle the installation for you. Most CE retailers offer HDTV mount installation with packages that include hanging your TV, connecting devices, concealing wires, and testing your equipment. **PG**

BY KRIS GLASER BRAMBILA

Get The Most Out Of Your _____ HDTV's Connections

Expand Your Entertainment Options

MOST HDTVs OFFER MANY DIFFERENT CONNECTION OPTIONS, allowing you to attach several devices to increase your multimedia options. The following will help you learn which devices you can plug into commonly found HDTV connections and what entertainment possibilities they deliver.

BY KRIS GLASER BRAMBILA

■ HDMI

BD (Blu-ray Disc) players let you watch your favorite movies in 1080p HD and can also upconvert your DVDs so that they play with near-HD video quality. Connecting your BD player with an HDMI cable ensures you're getting a true 1080p HD experience.

Game consoles let you interact with your HDTV, so you and your family can spend the night competing for first place in a race. By using the HDMI connection, your games will look clearer and more realistic than ever before.

Connecting a surround-sound system to your HDTV via HDMI ensures you'll hear your favorite movies and games the way they were intended, with clear, all-encompassing sound.

A/V receivers act as a hub for all your audio and video equipment. Most receivers connect to an HDTV's HDMI port and then route the correct amount of power and audio to each speaker, giving you a high-quality audio experience.



■ Composite

Enjoy classic games by connecting an older game console to your TV with a Composite cable.

Dig out your old VHS home movies and relive the past by hooking up a VCR.





■ Ethernet

Enjoy various built-in Web applications called widgets by connecting an Ethernet cable to your HDTV and browsing with your remote control. These can give you access to news feeds, sports scores, and online videos.



■ Component

Some game consoles can connect via Component cables rather than HDMI. Although Component cables don't offer the same picture quality HDMI does, you can still enjoy a night of gaming with friends and family.

Plan a family movie night and enjoy your favorite movies by connecting a DVD player to your TV with a Component cable. This will play your favorite DVDs on your HDTV in standard definition rather than HD.



■ Media Card

If your HDTV has a memory card slot, you can take your memory card out of your digital camera and plug it into your HDTV to share your latest photos with the whole group without using cords.



■ USB

If your HDTV has a USB port, you might be able to use a USB flash drive to share various files on the big screen, such as your favorite photo or music albums.

■ VGA

Attach your computer or HTPC (home-theater PC) and use your HDTV as the monitor. You can then browse the Internet from the comfort of your couch or pull up your pictures folder and share a slideshow.



Streaming Media 101

Bring PC & Online Content To The Big Screen

IF YOU'RE A FAN OF DIGITAL MEDIA, whether it's listening to Internet radio, creating your own cinematic home videos, or downloading TV shows on your PC, you'd probably like to enjoy the same content on your home theater. Fortunately, there are now a variety of home-theater components and Internet-connected HDTVs that are designed to stream media from popular Web services or access the content stored on your networked computers.

■ Streaming Options

The newest streaming media technology is the Internet-connected TV, which gives you the ability to access online videos and photos from sources such as YouTube and Flickr and news feeds from Yahoo! and *USA Today*, among others. Many Internet-connected TVs or Blu-ray Disc players, such as Insignia's Advanced Series Connected Blu-ray Disc Player on page 19, can also

play movies and TV shows from subscription-based services, such as Netflix. To play back media from networked computers without another device, the Internet-connected HDTV must be DLNA (Digital Living Network Alliance)-certified.

If you've recently purchased an HDTV that doesn't offer Web connectivity, you can invest in a media extender to be able to add streaming, such as a streaming media device, a game console, or a DLNA-certified BD player. These devices can connect to your home network to play the video, photo, and music files stored on your PC on your HDTV. And, similar to an Internet-connected HDTV, many streaming devices can also access popular video- and photo-sharing Web sites.

■ Prerequisites For A Well-Connected HT

Most importantly, you'll need a broadband Internet connection to take advantage of Internet services and to access your home network files on your HDTV. Typically, you'll run an Ethernet cable from your router to your home-theater streaming device. In some cases,

the streaming tool will feature built-in Wi-Fi or let you install a Wi-Fi adapter to connect wirelessly to your home network and the Internet.

If your streaming device supports DLNA, you'll simply need a PC with Windows Media Player 11 or 12. Otherwise, your PC will need to run a version of Windows that features Windows Media Center.

■ Streaming Advantages

Once you have your streaming setup ready to go, you'll be able to search though and play your music, photo, and video collections from the comfort of your home-theater room. You can catch up on the latest news, weather, and sports from on-screen widgets while you're watching your favorite programs.

Imagine how convenient (and impressive) it would be to show off family vacation pictures and home videos to friends using only a remote control. At parties, you could play custom music playlists to match the music tastes of your guests or the mood. Or, if you subscribe to an online movie rental service, you'll no longer need to wait for a disc in the queue. Just log in and find the movie or show you want to watch over the Internet.

These are just a few of the practical advantages you'll enjoy right away; we're sure you'll find many more once you start streaming. **FG**

BY NATHAN LAKE

Why You Should Be Streaming

- Listen to your digital music collection on a surround-sound system.
- Share home videos with friends and family on a bigger screen.
- Create and play a photo slideshow from your couch.
- Watch shows from online movie rental services or online videos on an HDTV.



MITSUBISHI'S Diamond 249 Series LCD HDTVs

Package The Best In Audio, Video & Media

Home-theater surround sound will seemingly put you in the middle of the action of your favorite flicks, but not everyone has the extra room or cash to splurge on home-theater speakers. With that in mind, Mitsubishi created its brand-new Diamond 249 Series LCD TVs—the LT-46249 and LT-52249 (\$2,599 and \$3,099, respectively; www.mitsubishi-tv.com)—which produce surround-sound quality audio without extra components. In addition to producing great audio, these TVs can also expand your entertainment options thanks to their integrated Internet connectivity and VUDU HD.

Technologies That Will Transport You

For a home-theater experience that will take you beyond your living room, each 249 Series HDTV features an integrated 18-speaker sound bar that unites high-quality Dolby Digital 5.1-channel audio

and Dual Driver Extended Range Sound with crisp, true-to-life video. Advanced image technologies such as Smooth 240 Film Motion will make fast-paced action scenes look fluid, and x.v.Color will make your TV's hues appear realistic—the way 1080p video should be seen. These advanced technologies are only a sampling of what's packed into each Ultra-Thin Frame, which measures less than 1-inch thick.

A Well-Connected HDTV

With over 2,200 HD titles and 16,000 standard-def titles total to choose from, the Diamond 249 Series' integrated VUDU will deliver the latest movies and TV shows from the Internet to your HDTV. Combined with 1080p HD video and surround-sound audio, your home theater is sure to become the hot spot where friends and family will want to hold movie nights.

Getting set up with VUDU requires very little effort—simply connect the HDTV

Diamond 249 Series Rundown

- 18-speaker setup reduces the need for speaker clutter and produces 5.1-channel surround sound
- Integrated VUDU HD puts thousands of HD and standard-definition movies and TV shows at your fingertips
- The 1080p video technology paired with x.v.Color provides a crisp, clear picture with true-to-life color

to your home network via an Ethernet cable or optional VUDU accessory bridge to gain access to VUDU's streaming content. Once you're connected to VUDU, you can use other Internet services such as Flickr, Pandora, and Picasa as well as an "On Demand TV" menu that offers more than 80 channels.

Other available connections include a USB port that you can use to connect a thumb drive to view and share personal media in your home theater for all to see. And finally, four HDMI ports give you the flexibility to add HD-capable components that will deliver uncompromised audio and 1080p HD video.

The Best In Entertainment

When high-quality audio and picture come together on a single HDTV, the results are great. However, when you join an HDTV with these traits with a plethora of Internet entertainment options, you have an HDTV that will never fail to impress. **FC**

HOW TO BUY A _____ Universal Remote Control

Simplify Your Home Theater

Your home theater is likely made up of several different devices, including your HDTV, disc player, and stereo system, among others. With those devices come plenty of remotes you can lose under your couch cushions. To streamline how you operate all of the components in your home theater, you can use one universal remote, and here we'll tell you what to look for when purchasing one.

Reduce Remote Clutter

When choosing a universal remote control, you should first make sure it can control all of your home-theater devices. Most models can support between 10 and 20 components, but consider purchasing a remote that supports more devices than you currently own, so you'll always have room for growth. You'll find universal remotes that are compatible with devices from thousands of brands, so it's likely that any universal remote you choose will work with your HT equipment, but it's wise to check a remote's packaging for specific compatibilities.

You'll also find that many universal remotes have an LCD screen, which can display channel information and navigation features. When shopping for a universal remote that has an LCD screen, make sure the LCD is large enough for

you to read. Also take into consideration that remotes with color LCDs tend to be easier to read than black-and-white LCDs. Some remotes even have touchscreens, making it easier to navigate through functions because you can see which functions you are enabling on-screen.

To help you find the right function when you're watching a movie in the dark, many universal remotes have built-in backlights, which illuminate each button and can help you find the pause button for intermission.

Because you don't want to have to spend a lot of time configuring your new universal remote, look for one that offers Web-based programming, which lets you connect your remote to your computer with an included USB cable and use the online wizard to help you to match up each of your devices to your remote. This can save you time, as you don't have to research which device codes you would need to individually enter into your remote.

Finally, check to see how the remote is powered. Because you'll be using one remote for so many devices, you're bound to burn through batteries. Instead of using disposable batteries, look for a universal remote with a rechargeable battery pack or charging station. Rechargeable remotes are not only more convenient, but also more

Features

- Remotes with an LCD screen display channel information as well as the available functions that you can enable.
- Remotes with Web-based programming make configuring your remote easy.
- A remote that uses a rechargeable battery pack is more convenient and saves money on batteries.
- Activity control features let you turn on multiple home-theater devices with only one button.

budget-friendly, as you won't have to spend money on new batteries.

Get Advanced Features

Once you've narrowed down your universal remote choices, take a look at a model's added features. Remotes that have learning capabilities can be taught commands from an original device-specific remote in order to add functions that it may be missing. For example, if you entered device codes for your DVD player, but the fast-forward button doesn't work, you can place your DVD player remote next to your universal remote, press one button, and the universal remote will learn how to operate that function.

And because setting up a movie may require you to turn on your HDTV, BD player, and surround-sound system, universal remotes with "activity control" let you program several devices to turn on with the touch of a button, making it especially easy for kids to watch their favorite movies.

Organize Your HT

No matter how many devices compose your home theater, a universal remote can make it easier for you and your family to operate each one, without searching for the specific remote first. **FG**

BY KRIS GLASER BRAMBILA

Advancing State Of The Art

Insignia Advanced Series Connected Blu-ray Disc Player



Although Insignia's Advanced Series Connected NS-WBRDVD BD player (\$179.99; www.bestbuy.com) isn't the first to let you instantly stream Netflix movies

to your TV over a Wi-Fi connection, it's currently the only player that gives you the most advanced and reliable Netflix experience. Now that streaming media to your HDTV is quickly becoming the popular new avenue for home-theater entertainment, Insignia's disc player can be your key to unlocking instant content from Netflix and more. To learn more about streaming your favorite digital media from the Web to your HDTV, see "Streaming Media 101" on page 16.

Streaming Entertainment

According to Insignia, the player is the first to support the new features available from the popular movie subscription service. For starters, you'll be able to add movies to your Instant Queue, remove others, and rate the films you've watched right on your TV screen. Compared to

other Netflix-compatible BD players that make you do all this from your PC, Insignia's player makes your streaming entertainment experience easier.

It also makes streaming more dependable. You really don't want to be interrupted with "loading" or "buffering" messages when you're trying to relax; you simply want to watch a movie. With this Insignia BD player, Netflix uses a technology called Adaptive Bitrate Streaming, which not only bumps up the quality of the video whenever your Internet connection is running fast enough but also makes streaming a movie virtually interruption-free, just like playing a movie disc. Adaptive Bitrate Streaming even helps your instant movie rentals begin playing right away.

There's more, of course. The Wi-Fi connectivity we mentioned above lets you take this Insignia player online quickly and securely without having to string a network cable to your living room. Of course, if you want to tap the rock-solid reliability of an Ethernet cord or power-line network, the Advanced Series Player

Main Points

- No other BD player currently lets you add, remove, and rate Netflix movies without using your computer.
- Cutting-edge adaptive streaming all but eliminates buffering delays that occur during Netflix movies.
- Wi-Fi connectivity makes it easy to access Netflix, BD-Live, and other online content.
- Enjoy slideshows of your photos and music on a USB flash drive or disc.
- Dolby TrueHD, DTS Master Audio, and Deep Color support lets you experience the best Blu-ray has to offer.

supports them, too. Besides easier access to firmware updates, an Internet connection makes you privy to bonus commentary tracks and other exclusive content available through BD-Live movie discs.

Additional Player Features

This Insignia Advanced Series NS-WBRDVD player can also turn your TV into a digital photo frame. Simply plug a flash memory drive into its USB 2.0 port, and it will play a slideshow of your JPEG and PNG photos accompanied by your MP3 and WMA music files.

Of course, it covers the bases of BD playback, too. It supports 7.1-channel, high-def surround sound all the way up to the high-end Dolby TrueHD and DTS Master Audio formats, and it includes Deep Color video features. Plus, it up-converts standard DVDs to 1080p Full HD resolution. **FC**



Insignia Advanced Series Connected Blu-ray Disc Player
\$179.99 • www.bestbuy.com



Logitech HARMONY

Universal Remotes

Take Control Of Your Entertainment Experience

Nothing kills the big-screen surround-sound home-theater buzz faster than having to juggle three or more remotes just to watch a movie. We'd wager that there's a bashful majority of us who are intimidated by the remote do-si-do required to get the TV, DVR, cable or satellite box, DVD or Blu-ray Disc player, and surround-sound system all on the same page. But with the help of Logitech's Harmony remotes (www.logitech.com), you can clear the clutter and take charge of your home-theater components like a pro.

The Harmony Advantage

Logitech has made a name for itself by delivering innovative, user-friendly products designed to give us greater control over day-to-day technology, and its Harmony remotes strike the perfect balance between ease-of-use and functionality. The Harmony Advanced Universal Remotes, including the Harmony 1100 (\$399.99), Harmony 900 (\$399.99), Harmony One (\$249.99), Harmony 700 (\$149.99), and Harmony 510 (\$99.99), let you command up to 15 separate devices (more than

225,000 supported devices from more than 5,000 brands), utterly eliminating that pile of remotes.

And those of us panic-stricken by the thought of taking the reins will love that all models feature an LCD screen with

simplified one-touch activity buttons that let you perform multiple complicated functions. For example, if you want to watch a DVD, just tap the Watch A DVD button, then the Harmony remote powers on any device that isn't already on, selects the appropriate inputs for the TV, and plays the DVD. Other one-touch functions let you easily listen to music, play games, and watch TV. The LCD also offers help when things aren't working as expected. You can even take advantage of Logitech's guided online setup and Harmony live customer support.

Harmony One Advanced Universal Remote

Logitech's most popular remote, the Harmony One, unifies your whole entertainment experience like no other universal remote can. This model lets you control up to 15 audio/video devices and employs a full-color touchscreen LCD to let you navigate functions and tap one-touch activity-based buttons to watch TV or a movie, listen to music, and more. The remote also features customizable backlit buttons intuitively organized so that you can easily find the control you want without even looking at the remote. Like other Harmony remotes, the Harmony One features a USB port for connecting to your PC, which lets you download updates and use the online setup wizard. Other features include a built-in rechargeable lithium-ion battery, a charging station, and an ergonomic slim-contour design that makes the remote comfortable to use. **FG**



Benefits Of Logitech Harmony Universal Remote Controls

- Control up to 15 devices to eliminate multiple remotes
- Watch TV or a movie, listen to music, and more with the press of a single button
- The Help button fixes your settings so you're never stuck
- Supports 5,000+ brands with more devices added every day, so it's future-proof

Yes, You Need To Calibrate

Get Optimal HDTV Video Results

The HDTV is the center of attention in any home-theater setup. To ensure that it is providing the best video results, consider a professional HDTV calibration.

Your Video May Not Be All That It Seems

While every HDTV owner is unique, the display settings on an HDTV may not be. If you want to ensure lifelike image quality for your HDTV, you'll need a professional to perform a calibration.

- Most TVs are shipped with a set standard video mode meant for an electronics store display—this means that the TV's settings are adjusted to show the best picture in a bright, fluorescent-lit environment. Because it's unlikely your lighting at home matches the store's surroundings, you should have your TV professionally calibrated by an ISF (Imaging Science Foundation)-certified specialist to

accommodate your home's unique lighting environment.

- An HDTV's viewing angle and your home-theater setup also affect how your HDTV should be calibrated. An ISF-certified professional takes these factors into account when making adjustments.
- Although you can expect to budget 10 to 15% of the purchase price of your television for a professional calibration, consider it an entertainment investment that will pay dividends for years to come.

Why A Professional Calibration?

Instead of taking a chance with your HDTV investment, rely on professionals to handle the work for you.

- Calibration specialists are ISF-certified, which means they are trained to use highly specialized and expensive equipment to calibrate HDTVs correctly.
- A calibration DVD might be a tempting alternative, but it won't let you adjust all of your HDTV's settings. An ISF-certified professional can access advanced service menus to calibrate your TV correctly. These settings

aren't meant to be experimented with, so if you poke around and gain access to your TV's service menu, it's best to leave it alone. Many customers have rendered their TV useless because they didn't know which settings they were changing.

- Calibration DVDs only adjust video settings for your HDTV's DVD input. This means when you're watching video from a source other than a DVD, your picture won't be calibrated. A professional calibration takes care of two source inputs, such as your DVD player and cable box inputs.

What You Can Expect

An in-home calibration service will typically last about two hours and includes the following:

- A professional will use color analyzer equipment to objectively tune color saturation and temperature as precisely as possible, letting you see video exactly the same way it looked when it was created.
- Your HDTV's contrast will be set up to provide greater video detail, as well as the darkest blacks and brightest whites.
- No matter which calibrated source input you are using, you will enjoy the best image clarity and sharpness that your HDTV can provide. **FC**



Essential

THINGS TO KNOW

WIRELESS SYSTEMS

Q What do I need to start wirelessly streaming media from my PC to my TV?

A You'll need to create a wireless network with a Wi-Fi router; a PC; and a media-streaming device, such as a media extender, Wireless USB transmitter and receiver, or network-capable HDTV with a wireless adapter.

Q How does media streaming work?

A Your PC and TV are connected via Ethernet cable or Wi-Fi, either directly or via a media extender. You can use a remote control to navigate menus on your TV to access and play back PC-based or Internet media.

Q What is a media extender?

A A media extender is essentially a cut-down PC dedicated to passing digital media from your PC to your home theater.

Q What role does a media extender play in a wireless home-theater system?

A Media extenders feature audio and video outputs to connect to your TV and an Ethernet port or Wi-Fi capabilities to connect to your PC.

Q What role does my PC play in a wireless home-theater system?

A The PC in a home-theater setup typically acts as the portal for Internet access and the primary storage location for videos, music, and photos.

Q How well does 802.11b Wi-Fi support media streaming?

A 802.11b should be able to handle audio and photo streaming, but it may struggle with standard-definition video content.

Q How well does 802.11g Wi-Fi support media streaming?

A 802.11g should be able to stream standard-definition video, audio, and photos, but it may not transmit high-definition video very well.

Q How well does 802.11n Wi-Fi support media streaming?

A 802.11n wireless networks offer the best streaming quality and can support high-definition video, standard-definition video, audio, and photo streaming.

Q Is there an alternative to a wired surround-sound home-theater audio system?

A Yes. Some home-theater audio systems feature wireless rear and satellite speakers, which let you optimally position them without having to deal with wires.

Q The speakers on my TV aren't cutting it, but a 5.1-channel speaker setup would be too much. What should I do?

A For an elegant audio upgrade, consider a 2.1-channel sound bar speaker and wireless subwoofer combo, which will sound dramatically better without running speaker cable everywhere.





HDTV Glossary

B alderdash! OK, HDTV jargon isn't *that* bad, but there are a few terms every shopper should know. Here's your cheat sheet.

aspect ratio—Put simply, it's the shape of the TV's screen. An HDTV has a wider picture than a traditional TV of the same vertical screen height. An HDTV has a 16:9 aspect ratio, meaning that if its screen were 16 inches wide, it would be 9 inches tall. A regular 4:3 TV screen would be 12 inches wide at the same 9-inch height.

HDMI—High-Definition Multimedia Interface is a type of cable connection that carries both high-resolution video and uncompressed multichannel audio among HDTVs, home-theater receivers, and other components. HDMI cables maintain top picture and sound quality.

HD tuner—Some more expensive HDTVs include a built-in tuner for receiving local high-def broadcast TV channels. Your TV doesn't need an HD tuner if you have cable or satellite service. Separate HD tuners and antennas are available for HDTVs without them.

interlaced—When an HDTV displays an interlaced image, as in 1080i or 480i resolutions, it really shows you every other horizontal line of a frame of video (called a field) at a time. Sixty times a second, the TV displays the other field of the frame, meaning the lines not shown in the previous field. Interlaced video can appear to flicker or might cause moving objects on-screen to have blurred edges.

LCD (liquid-crystal display)—Like a notebook's screen, an LCD HDTV uses a fluid crystal substance to form pixels of color in front of a backlight. LCDs may not be able to match plasma TVs' deep black and gray areas, but they're lighter, sometimes less fragile, and considered easier to set up. These work better in brighter rooms or if you will be playing unchanging images on the screen for an extended period of time.

plasma—Plasma TVs use a tiny tube of gas for each pixel. Electricity makes each pixel glow. Plasmas create deeper blacks and sometimes brighter colors than LCDs and have better contrast. These also offer slightly better viewing angles. However, older or less expensive models can also suffer permanent screen damage if an unchanging image

is displayed too long, such as a TV channel's stock ticker or parts of certain video games.

progressive scan—A TV showing a progressively scanned image, as in 1080p or 720p resolutions, displays a full frame of video (both odd-lined and even-lined fields) all at once. Progressive-scan video looks sharper and doesn't flicker like interlaced images can.








projection—Some large-screen HDTVs offer lower-priced alternatives to LCDs or plasmas by using projection technologies. These technologies vary, but all projection TVs throw light on a screen from the front or rear. This means they are bulkier than plasmas or LCDs, but some rear-projection sets have stellar picture quality.

viewing angle—No matter where you sit in front of an HDTV with a wide viewing angle, such as 170 degrees, its picture should look reasonably good. Test this before you buy.

widescreen—A TV or monitor that's wider horizontally in relation to its vertical height. HDTVs typically have a 16:9 aspect ratio rather than an older 4:3 display. **PG**

Which LCD TV Is Best For You?

So you've decided to get an LCD TV. The next step is deciding *which* LCD TV to invest in. With all the models on today's market, you want to be sure the model you select is the best for you and your family. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate**
	What It Means	The diagonal measurement of the TV's screen	Height x width x depth; how much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	Panasonic VIERA TC-L37X1 MSRP: \$799.95* SKU 9235124	37 inches	22.8x36.1x3.9 inches; 36 pounds (with stand)	720p	178 degrees	3 HDMI; 1 DVI; 1 S-Video; 1 Component; 2 Composite; 1 PC; 1 RF	1 audio	60Hz
	LG 42LH50 MSRP: \$1,699* SKU 9321637	42 inches	25.9x41.4x3.6 inches; 37.9 pounds	1080p	178 degrees	4 HDMI; 2 Component; 2 Composite; 1 RF; 1 USB; 1 LAN	1 audio	120Hz
	Samsung LN46B640 MSRP: \$1,899* SKU 9293506	46 inches	30.4x46.1x3.1 inches; 44.8 pounds	1080p	N/A	4 HDMI; 2 Component; 2 Composite; 2 USB; 1 PC	N/A	120Hz
	Sharp Aquos LC-52LE700UN MSRP: \$2,499.99* SKU 9514153	52 inches	30.1x48.7x3.7 inches; 50.7 pounds	1080p	176 degrees	4 HDMI; 1 S-Video; 2 HD Component; 2 Composite; 1 RS-232C; 1 PC	4 audio	120Hz
	Sony Bravia KDL-55V5100 MSRP: \$2,599.99* SKU 9476373	55 inches	33.8x52.6x4.6 inches; 75.2 pounds	1080p	178 degrees	4 HDMI; 2 Component; 2 Composite; 1 S-Video; 1 USB; 1 RF; 1 PC	1 audio	120Hz
	Mitsubishi LT-46249 MSRP: \$2,799* SKU 9427211	46 inches	28x42x3 inches; 68.6 pounds	1080p	N/A	4 HDMI; 3 Composite; 3 Component; 1 RF	2 audio	120Hz
	Sony Bravia KDL-46XBR8 MSRP: \$3,699.99* SKU 8996508	46 inches	27x49.6x5.7 inches; 71.6 pounds	1080p	178 degrees	4 HDMI; 1 S-Video; 2 Component; 1 PC; 1 USB; 1 SD	1 audio	120Hz
	Sharp Aquos LC65E77UM MSRP: \$3,999.99* SKU 9554779	65 inches	37.6x60.75x4.7 inches; 99.2 pounds	1080p	176 degrees	4 HDMI; 1 S-Video; 2 HD Component; 1 Composite; 1 PC	4 audio	120Hz

*Prices listed in this issue are for general reference and may vary from retailer pricing.

***Unless specified, this is without stand

** Comparing refresh rates between plasma and LCD TVs is like comparing apples to oranges. For more in-depth information about refresh rates, please ask a sales associate.

Which Plasma TV Is Best For You?

If you're planning on buying a plasma HDTV, it might be hard to decide on one just by looking at a wall of gorgeous sets. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate**
What It Means		The diagonal measurement of the TV's screen	Height x width x depth; How much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	Insignia NS-P42Q10A MSRP: \$599.99* SKU 9299822	42 inches	26x41.5x3 inches; 54.2 pounds	720p	160 degrees	2 HDMI; 1 Composite; 2 Component; 1 RF	2 audio	600Hz
	Samsung PN42B450 MSRP: \$799.99* SKU 9235259	42 inches	26x41.6x2.9 inches; 61.3 pounds	720p	N/A	3 HDMI; 1 Composite; 1 PC	N/A	600Hz
	Panasonic VIERA TC-P42X1 MSRP: \$899.95* SKU 9219213	42 inches	N/A	720p	N/A	3 HDMI; 1 S-Video; 2 Component; 2 Composite	1 audio	600Hz
	Panasonic VIERA TC-P50X1 MSRP: \$1,099.95* SKU 9219062	50 inches	32.125x48x4.13 inches; 75 pounds	720p	N/A	3 HDMI; 1 S-Video; 2 Component; 2 Composite	1 audio	600Hz
	Samsung PN50B450 MSRP: \$1,199.99* SKU 9239371	50 inches	29.5x48.1x2.9 inches; 77.2 pounds	720p	N/A	3 HDMI; 1 Composite; 1 PC	N/A	600Hz
	Insignia NS-P502Q-10A MSRP: \$1,199.99* SKU 9299886	50 inches	32x48.4x11.8 inches; 72.7 pounds	1080p	160 degrees	2 HDMI; 2 Component; 1 Composite; 1 RF	2 audio	600Hz
	Samsung PN58B850 MSRP: \$3,099.99* SKU 9293622	58 inches	36.2x56x13.3 inches; 81.3 pounds	1080p	N/A	4 HDMI; 2 Component; 1 Composite; 1 PC	N/A	600Hz
	Pioneer KURO PDP-6020FD MSRP: \$3,999* SKU 8867871	60 inches	34.5x57x3 inches; 112 pounds	1080p	N/A	4 HDMI; 1 Component; 3 Composite; 1 S-Video	2 audio	N/A

*Prices listed in this issue are for general reference and may vary from retailer pricing.

***Unless specified, this is without stand

**Comparing refresh rates between plasma and LCD TVs is like comparing apples to oranges. For more in-depth information about refresh rates, please ask a sales associate.

NOTEWORTHY

Accessories & Services

As you head toward the HDTV section of your local consumer electronics store, you'll invariably pass shelves of bland-looking HDTV accessories. There are a handful of accessories that are vital to getting the most from your HDTV. The following is a rundown of accessories we recommend to complete your home-theater setup. **RE**



WALL MOUNTS & BRACKETS

- View your HDTV from the best possible angle
- Adjust your TV's position by tilting it up or down as needed
- Maximize space in your viewing room by hanging up your TV



CLEANING KIT

- Protect your HDTV's screen by using specially formulated sprays and cloths while cleaning it
- Eliminate the danger of scratching delicate screens
- No-drip formulas prevent damaging other home-theater equipment



CORD-CONCEALMENT KIT

- Hide multiple cords while keeping them organized
- Minimize cord clutter, especially with wall-mounted sets
- Keep the focus on your new HDTV, not the cords connected to it



TV STANDS

- Offer flexibility if you're unable to mount your HDTV on the wall
- Available in a variety of finishes to match any décor
- Provide a place for additional home-theater equipment

HDMI CABLES



- Carry uncompressed digital audio and video signals to and from your HDTV and its components
- Eliminate interference from other components with shielding found in higher-end models



UNIVERSAL REMOTE CONTROL

- Simplify your home-theater setup with one remote that can control all of your components
- Program different functions so that you will be able to, for example, watch a movie by pressing just one button
- Easily view options in the dark with a backlit LCD



SURROUND-SOUND SYSTEM

- Maximize your HDTV experience with theater-like audio
- Feel like you're in the movie scene instead of just watching it
- Even out softer and louder programming with an equalizer



SURGE PROTECTORS/POWER CONDITIONERS

- Protect your home theater from potential damage by using a surge protector that will absorb electrical fluctuations
- Filter out "dirty power" (also known as electrical "noise" or radio interference) that can degrade your home theater's audio and video with a power conditioner
- Have peace of mind knowing that your home theater will give you its peak performance for the longest amount of time



HOME-THEATER SERVICES

A home theater is a pretty big investment, so it's wise to consider letting a professional handle your installation and setup. Let your local CE retailer tackle the following tasks, and you'll be able to enjoy the full glory of HD in no time.

- Home Theater In-Home Consultation
- TV Recycling
- TV Calibration
- TV Mounting & Cord Concealment
- Remote Control Programming
- Speaker Setup

SanDisk Memory Cards

Pair Them With Your Holiday Gifts



DIGITAL IMAGING

Half of the fun of opening holiday gifts is telling everyone what wonderful items you received, and the other half is actually putting them to use. If you received a camera or smartphone, you might be missing a very important component that makes videography and photography possible: memory cards. Matching the right memory card to your camera or smartphone is important to SanDisk (www.sandisk.com), and that's why they offer high-speed, intelligent, and reliable cards specifically designed for each gift you received.

If You Got A New D-SLR

A D-SLR camera needs a memory card with a fast read/write speed. The SanDisk Extreme CompactFlash card

features a read and write speed of 60MBps, which will let you store and upload photos at a fast rate. Add the SanDisk Power Core Controller, and you'll experience the rapid data distribution that quickly and efficiently disperses image data across the card. Also included is one free year of RescuePRO Data recovery software use.

If You Got A New Point-And-Shoot Camera




Because you're planning on taking your new point-and-shoot camera everywhere you go, it will need a durable card that can withstand hot and cold conditions. A SanDisk Ultra SDHC card meets these needs and provides both the durability and transfer speed required to save and protect every image you snap on your snowy mountain hikes.

If You Got A New Smartphone

Smartphones are designed to house all types of multimedia, and they're especially practical for taking photos or video while you're on the go. Be sure to purchase a SanDisk microSDHC memory card as a storage companion for your new smartphone. It includes 16GB of mobile flash memory, which will give you enough room to store both photos and video clips.

The Right Card For The Right Gift

Now that you know how important it is to pair your camera with the right memory card, check out the chart below to see which one will best fit your lifestyle (and device) needs. **FE**

	For Your D-SLR Camera	For Your Point-And-Shoot Camera	For Your Smartphone
Card Type (card compatibility will vary depending on camera model)	SanDisk Extreme CompactFlash Card 	SanDisk Ultra SDHC Memory Card 	SanDisk microSDHC Memory Card 
Available Capacities	8GB, \$145.99 (SKU: 9487959) 16GB, \$246.99 (SKU: 9487986)	4GB, \$36.99 (SKU: 8304541)	2GB, \$12.99 (SKU: 8699107) 4GB, \$31.99 (SKU: 8439932) 8GB, \$44.99 (SKU: 8704397) 16GB, \$108.99 (SKU: 9054337)
How It Will Improve Your Photography	The SanDisk Power Core enhances the card's endurance	Provides reliable storage even in adverse conditions	Lets you save your mobile photos and videos immediately
New Features & Benefits	<ul style="list-style-type: none"> • Extreme speed, at up to 60MB/sec read/write speeds (400X), ideal for continuous burst shooting and HD video • SanDisk proprietary controller technology, to distribute data more rapidly and efficiently • Extreme durability for extreme environments, sealed with RTV silicone for added protection against moisture and humidity 	<ul style="list-style-type: none"> • Step up to faster performance with up to 15MB/second read speed; write speed lower • Store more high-quality images and video with up to 32GB capacities • Class 4 speed performance rating ideal for capturing video clips 	<ul style="list-style-type: none"> • Stores music, video, and other media; inserts directly into your smartphone

FirstGlimpse

HOW TO BUY

A Digital Photo Frame

Show Off Your Favorite Images

W

ith the variety of great photo opportunities that occur during the holiday season, it might be difficult for you to choose your fa-

vorite shots to display. Thus, a digital photo frame might be the perfect gadget to start off the new year, as it will let you show off as many pictures as you want in just one frame. To find a digital photo frame that best meets your lifestyle needs, keep the following considerations in mind.

Screen Size

Digital photo frames come in a variety of sizes, with screens ranging from less than four to more than 12 inches. The frame size you need will depend on where you want to display your digital snapshots. Smaller frames are ideal for a living room table or your office desk, while larger frames can be placed on a fireplace mantel or become part of a wall photo collage.

You should also consider the frame's aspect ratio, which determines the width and height that a frame is capable of playing. Most cameras shoot in 4:3, which will give you standard fullscreen photos, but if you want to be able to view your widescreen panoramic shots, choose a model that is 16:9.



Storage Type

Once you've decided on a frame size and aspect ratio, you need to select the type of digital photo frame storage media you want to use. Some models offer ample internal flash memory, so you directly load your favorite pictures into the frame. If a frame contains very little internal memory, check to see if it features a plug-and-play USB port. This will let you save photo files to a USB flash drive and insert it into the frame for your viewing enjoyment. Many frames also include memory card slots, so you can pop in your camera's memory card to instantly view your photos.

For a more hands-off approach, more expensive models have built-in Wi-Fi capabilities, which can be used to stream pictures directly to your frame from your PC or online photo sharing services. Or, a frame with Bluetooth capabilities

DIGITAL PHOTO FRAME

Shopping Tips

- Choose a frame size by determining where the frame will be placed in your home.
- Buy a frame that offers the most convenient storage type.
- Ensure the digital frame you choose has a high enough contrast ratio and resolution so your photos look their best.

will let you import photos directly from your Bluetooth-enabled device.

Image Quality

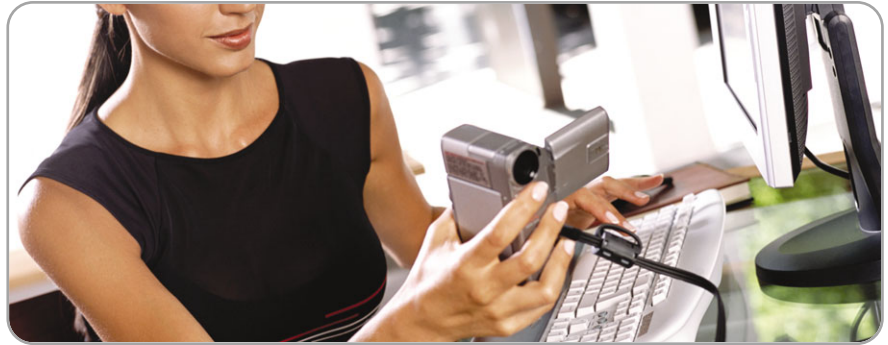
When considering image quality, you'll need to look beyond a frame's screen size. Instead, pay attention to its resolution, such as 800 x 600. The higher the resolution, the more detailed and crisp your photos will appear. Also pay attention to contrast ratio, such as 500:1, which will indicate how bright the white hues and how dark the black tones in your photos will look on-screen. The higher a contrast ratio, the less likely your images will look dull or washed out. Finally, be mindful of the frame's viewing angle, which will tell you how easily you'll be able to see photos when you're not looking at the frame straight on. **FG**

BY KRIS GLASER BRAMBILA

Do More With Your Digital Memories

Share Pics & Videos Anywhere

Snapping pictures and shooting videos with your digital camera or camcorder is how you commemorate the special moments in your life. And once you have them captured, you'll want to share them with family and friends. Thanks to a variety of CE devices, there are plenty of ways you can show off your photos and home movies, whether you're at home or out on the road.



your slideshow and create games, such as a puzzle or doodling, from your pictures.

feature a miniature memory card slot to access your pictures.

Share At Home

There's only so much room on your coffee table or bookcase to display framed photos. With a digital photo frame, you can show off an entire album in a slideshow format, right in your living room. Many digital photo frames require a memory card or USB flash drive to store the photos you want to display, but some digital frames have built-in Wi-Fi capabilities and can use your wireless home network to access the images stored on your computer.

Connecting your digital camera or camcorder to your HDTV is another easy way to gather the family together and relive moments from last year's trick-or-treat outing. Just plug in your camera's included A/V cables, a USB flash drive, or memory card to the respective ports, depending on what your TV has available.

If you have a gaming console with a memory card slot or USB port, you can use your console to watch home movies or view pictures on your HDTV. Many gaming consoles can also play music with

On-The-Go Sharing

Next time you run into an old acquaintance at the grocery store, be prepared to share photos and videos of your kids' latest antics by storing the memories on a portable device, such as a smartphone or cell phone. Many phones have a built-in camera or camcorder, so you can use them to take photos and videos to add to your mobile device's collection. Some also

Select GPS devices also have the capability to let you view photos, which will be useful after you've snapped pictures during a road trip to the Grand Canyon. Simply insert your memory card into the included slot. This might give you a bigger viewing screen, and it can help conserve your camera's battery.

What if you can't wait to share an adorable photo of your daughter riding a Shetland pony at the zoo? If your portable media player has Internet connectivity in addition to a camera or camcorder function, you can send the pictures and videos via email or post them to a blog or photo-sharing site.

Top Memory Sharing Tips

- Don't let your favorite pictures and videos get buried on your computer's hard drive.
- Digital photo frames rotate through entire albums in one picture frame.
- Use your HDTV to share pictures and videos with the whole family.
- Share pictures on the go with your smartphone, GPS device, or portable media player.

Put Your Digital Memories To Use

There are a wide range of options to help you display and enjoy your digital memories, whether you're relaxing at home in front of the TV or using a GPS device to navigate during a once-in-a-lifetime vacation. **FG**

BY KRIS GLASER BRAMBILA



Choosing Photo Paper

From The Darkroom To The Computer Room

Today's photo printers can churn out pictures that look like they were developed at a professional photo processing center for mere pennies per print. Unfortunately, many people don't get the most out of their photo printers because they run standard copier paper through them, missing out on all of the benefits provided by true photo paper.

Photo paper uses special coatings that absorb ink, making sure it doesn't spread out and intermingle with other colors. The coatings also let ink dry more quickly, so it doesn't smear when you pull pictures out of the printer, and helps your printouts last longer by preventing fading. Read on for tips on buying the photo paper best for your printer and images.

Match The Manufacturer

Purchasing paper from the same manufacturer as your printer is one of the best ways to ensure your snapshots look sharp and the colors are as vibrant as possible. Printer manufacturers extensively test their photo inks and toners so that they work consistently with their paper. So, for example, if you have an Epson printer,

such as the Epson Artisan 50 Inkjet Printer (\$129.99; www.epson.com), you'll want to make sure you buy Epson paper to use with it.

Another benefit of buying paper from your printer manufacturer is it will be the right size for your model. This is especially important when you're creating borderless prints, which are photos with no white edges that are similar to the ones you'd get from the photo processing center.

Finally, make sure any paper you buy is labeled for your printer type, as inkjets and color laser printers use different technologies to create prints and therefore work best with specific types of paper.

Know Your Photo Paper

- Buy paper from your printer's manufacturer.
- Glossy works great for photo albums.
- Matte is best for photos you'll frame.

Different Paper For Different Printouts

After you've found photo paper that works best with your printer and ink, you have a variety of paper formats to choose from. Some standard sizes are 4x6 for photo albums, 5x7 for smaller framed prints, and 8x10 for larger framed prints. These sizes are pre-cut, and you can also get perforated sheets for printing wallet-sized pictures that make it economical to share prints with lots of people.

Your photo paper's finish is also important to consider. For photos you might put in an album, a glossy or semi-gloss finish is nice for making colors pop. But a nonreflective matte finish often works better for photos you intend to frame, as you don't want to add to the glare already produced by the glass.

Final Thoughts

To make photo printing easier, look for special touches that paper manufacturers include to ensure you don't make mistakes. Some photo paper will have a watermark on the back side, which will prevent you from accidentally loading and printing on the paper upside down. **EG**



Here's a look at the same picture, using different focal lengths. Notice how the duck is hardly noticeable in the first shot but becomes very obvious when you zoom in.

DIGITAL IMAGING

Spanning The Spectrum

Focal Lengths Explained

If you've shopped for a D-SLR before, you've probably noticed that many are available in a kit that includes a camera body and lens. Kit lenses typically have a focal length range of 18 to 55mm, but there are many other lenses available, each of which has a different purpose.

For example, telephoto lenses let you zoom in to get a closer look, while wide-angle lenses let you see more of your surroundings. By understanding the difference in the focal lengths among lenses, you'll have a better knowledge of which type of lens best suits your needs. And if you're in the market for your first D-SLR, you may find that using a lens other than the kit lens will best suit your needs. As a result, you may decide to forgo the kit lens and save money by buying just the camera body and then put the money you saved toward a specialized lens.

Basic Lens Types

Typically, lenses are grouped into categories based on their focal length, which describes a lens's zoom capabilities. A wide-angle lens gives you a broad field of view. Wide-angle lenses usually have a focal length of 40mm or less.

Shooting Range

- A standard lens is perfect if you want a range of wide-angle to slightly telephoto views.
- With a macro lens, you can take close-up shots of small objects, such as flower petals, without distorting the image.
- If you're into nature photography, you may want a telephoto zoom lens. With this lens, you'll be able to photograph wildlife in a national park without needing to get too close.

Standard lenses have focal lengths ranging from about 30 to 50mm. This type of lens most closely matches the perspective of the human eye. Telephoto lenses magnify objects and typically have focal lengths higher than 50mm. Lenses with a focal length greater than 200mm are called super-telephotos. Close-up or macro lenses let you focus on something that is a short distance from the camera. Macro lenses can range in focal length.

Choose Your Zoom

In general, the kit lens that accompanies a D-SLR is a good starter lens. As your photographic needs grow, however, it's worth considering specialized lenses. Because focal length determines your range of view, it will play a big part in helping you decide which type of lens will best suit your photographic needs. **FG**

BY JENNIFER JOHNSON

Get To Know CMOS

The Eye Of The Digital Camera



When shopping for a digital camera, digital camcorder, or mobile phone, you'll often see the acronym CMOS (complementary metal-oxide semiconductor) listed next to the device's megapixel rating. CMOS is the image sensor, which means that it's responsible for converting light into an electronic signal. In this article, we'll explain what the CMOS is and how its size can affect the quality of your images.

Light Becomes Data

The CMOS is a silicon chip that's covered in millions of light-sensitive picture elements—aka pixels. Think of each minuscule pixel as an eye and the CMOS as the brain. The CMOS collects the data from every pixel and forms the information into a digital image. The number of pixels on the CMOS equates to the megapixel rating of a digital camera—but there's more to a CMOS sensor than just its pixel count.

The physical size of the CMOS can significantly affect the quality of your images.

If two cameras had the same megapixel rating but different-sized CMOS sensors (all other things equal), the camera with the larger CMOS would take better pictures. The camera with the larger CMOS would capture more light than the smaller CMOS, resulting in images that display more true-to-life color and less image grain. In particular, a camera with a larger CMOS would perform better in low-light situations, because the camera could detect a greater amount of light. The greater light-capturing ability would also allow the camera to produce darker blacks and brighter whites.

CCD & CMOS

Not all digital cameras and camcorders use a CMOS image sensor; some models feature a CCD (charge-coupled device). Experts regularly disagree about which type is better, and both types can be found in low- and high-end cameras. On the plus side, CCD and CMOS sensors function in a similar manner, so you can also apply our CMOS sensor size guidelines to CCDs. **FG**

BY NATHAN LAKE

It's Not About The Megapixels

The more megapixels your digital camera offers, the larger the photographs you can create with the digital images. But unless you need poster-sized prints, a 7MP or 8MP camera gives you enough pixels to produce film-quality (300 ppi [pixels per inch]) photos at a variety of sizes—including prints up to 8x10. ●

Camera Resolution	Maximum Print Size
Megapixels* (WxH pixels, approx.)	At 300 ppi (WxH inches, approx.)
5MP (2,592 x 1,944)	6x8
6MP (2,816 x 2,112)	7x9
7MP (3,072 x 2,304)	7x10
8MP (3,264 x 2,448)	8x10
9MP (3,488 x 2,616)	8x11
10MP (3,888 x 2,592)	8x13

*Megapixel = 1 million pixels

DIGITAL CAMERA

Features

Put Them To The Test

Even if a camera lists the specs you want, you won't really know what kind of pictures it can take until you play with its settings. Here are some tips on how to find a camera that delivers the performance you seek by testing its features in-store.

Enjoy Lifelike Images

Looking back on the pictures you took of your daughter's first birthday should make you feel as though you're reliving the moment, so you'll need to find a camera that can accurately reproduce colors and doesn't make your loved ones look washed out when you use the flash.

To find out if a particular camera model shoots images that look true-to-life, put it in auto mode and snap photos of objects that are near and far from where you're standing. The pictures you take should have vivid colors that don't have an unnatural blue or orange hue. To see a camera's flash results, perform the same test with the flash turned on.

The resulting images should show your subjects evenly lit, not overexposed or extremely white.

Shoot Clear Close-ups

A camera with an adequate optical zoom lens will let you get close to your subjects even if you're standing at a distance. This will let you capture clear shots of your kids playing in the snow, even when you're standing on your backyard deck. To try out a camera's optical zoom, point the lens toward an object that's distant from you, such as a sign, and zoom in to see if you can read the text. This will tell you how far you can be from your subjects and still capture close-up moments.

If you plan to take images that require plenty of zoom and want to get crisp close-ups, your camera should also have a good image stabilization feature. This helps prevent image blur by countering any movement you make while you hold the camera to frame a shot, and these accidental shakes can be more noticeable when you're trying to photograph from long distances.

Top Camera Features To Test

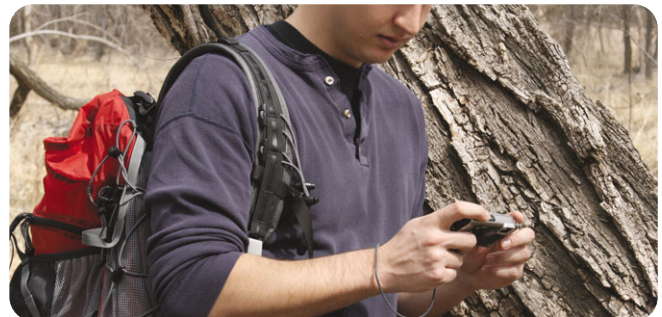
- **Color reproduction:** Take a few candid shots in the store to see if the camera reproduces true-to-life colors without adding an unnatural hue.
- **Flash:** A good flash will evenly light your subject without overexposing it.
- **Zoom:** Zoom in on a distant subject to make sure the camera can get as up close as you need.
- **Image stabilization:** A digital camera with adequate image stabilization should help you take sharp shots even if your hand shakes while you're taking a picture.

To determine how well a camera can handle unintentional movement, zoom in on an object that's across the room and take note of how the on-screen image moves as you try to frame your picture. Regardless of this movement, when you snap a shot, a good image stabilization feature will ensure that your final image result is sharp and in-focus, without blurring lines.

Choose The Right Camera

There are other features you can test while you're shopping for a digital camera, such as how quickly a face detection function locks onto your subjects' faces or whether the camera's menus and buttons are easy for you to navigate. You should also check the LCD to make sure it fits your needs. **FG**

BY KRIS GLASER BRAMBILA



Essential

THINGS TO KNOW

FACTORS THAT AFFECT HOW MANY PHOTOS YOU CAN TAKE

Q What are the main factors that determine how many digital photos I can take?

A The storage capacity of your camera, the file size of each photo, and possibly the camera's battery life.

Q What is internal memory?

A This is permanent flash memory built into certain cameras, and it's usually used as a supplement to a removable memory card.

Q How does the camera's internal storage capacity affect the number of photos I can shoot?

A The more megabytes your camera's internal memory can hold, such as 32MB, the more digital photos you can take without using removable memory cards.

Q If a camera has internal memory, why do I need to purchase memory cards?

A Typically, internal memory is only big enough for a few photo files. A memory card can hold hundreds or thousands more.

Q My camera's memory is full. How can I take more photos?

A Eject the full memory card and insert an empty one. Alternatively, move the photos to a computer using a USB or FireWire cable or delete unwanted photos.

Q Why do my photos' file sizes affect the number of photos I can take?

A Each picture you take creates a digital image file. The larger the file is in KB or MB, the fewer of them the camera can store on its storage media.

Q What determines an image's file size?

A A photo's resolution, which is expressed in megapixels (millions of picture elements, such as 10MP), affects the amount of storage space it occupies. The more megapixels, the bigger the file.

Q What other aspects of a photo file affect its size?

A Most digital cameras produce compressed JPEG format photo files. However, many can also make uncompressed RAW files of higher quality, but at much bigger file sizes.

Q How can I reduce my photos' file sizes?

A Use JPEG instead of the RAW format. Also, lower your camera's image quality or resolution setting. You'll be able to snap many more photos this way.

Q What are the drawbacks of smaller photos?

A They have less detail than images with higher resolutions. Small pics are fine for emailing or posting online, but they won't look sharp if you try to enlarge them later.



Which Point-&-Shoot Camera Is Best For You?









If you're a little confused about the most important features in a digital camera, you're not alone. In this chart, we compare features from select digital cameras, and we also explain what these features mean.

What It Means		Resolution; Optical zoom	Shutter speed	Memory card	LCD size	Battery life	ISO	Movie mode
		More pixels mean bigger and clearer prints; Moves the lens closer to your subject	A faster shutter speed will let you snap action photos without blur	Removable card that stores your photos in your camera	The LCD is the screen on the back of the camera	Based on how many shots you can take on a single charge	A higher ISO lets you take better photos in low-light settings	Lets you record short video clips on your digital camera
	Pentax Optio E80 MSRP: \$129.95* SKU 9555849	10MP; 3X	1/4 to 1/2,000 second	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200, 6400	Yes
	Fujifilm FinePix Z37 MSRP: \$149.95* SKU 9464741	10MP; 3X	3 to 1/1,000 seconds	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600	Yes
	Olympus Stylus-7010 MSRP: \$199.99* SKU 9454226	12MP; 7X	1/4 to 1/2,000 second	xD-Picture Card/ microSD	2.7 inches	170 shots	Auto; Manual: 64, 100, 200, 400, 800, 1600	Yes
	Fujifilm FinePix F72EXR MSRP: \$279.95* SKU 9503469	10MP; 10X	1/4 to 1/2,000 second	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200, 6400, 12800	Yes
	Nikon Coolpix S70 MSRP: \$349.95* SKU 9463662	12.1MP; 5X	1 to 1/1,500 second	SD/SDHC	3.5 inches	200 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200, 6400	Yes
	Samsung DualView TL225 MSRP: \$349.99* SKU 9501791	12.2MP; 4.6X	1 to 1/2,000 second	microSD/ micro-SDHC	3.5 inches; 1.5 inches front LCD	N/A	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200	Yes
	Canon PowerShot SX20 IS MSRP: \$399.99* SKU 9455127	12.1MP; 20X	15 to 1/3,200 seconds	SD/SDHC/ MMC/ MMCplus	2.5 inches	340 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	Nikon Coolpix S1000pj MSRP: \$429.95* SKU 9613973	12.1MP; 5X	2 to 1/1,500 seconds	SD/SDHC	2.7 inches	220 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200, 6400	Yes

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which D-SLR Is Best For You?









As D-SLR prices keep coming down, more photographers are turning to them, both as a first camera and as a trade-up to something better. In this chart, we'll help you sort through some of the features and performance specs from select D-SLR cameras.

		Resolution	LCD size	ISO range	Kit lens	Burst speed	Shutter speed
	What It Means	Image sensor in megapixels; more means a bigger image	Diagonal measure of screen on back of camera	A higher ISO range will let you take better photos in low-light situations	Standard lens bundled with the camera body	Frames per second (fps) you can shoot while in burst mode	The wider the range, the greater the gamut of long exposures to frozen action
	Sony Alpha A230L MSRP: \$549.99* SKU 9342473	10.2MP	2.7 inches	10 to 3200	18-55mm standard zoom lens	2.5fps	30 to 1/4,000 seconds
	Nikon D3000 MSRP: \$599.95* SKU 9456803	10.2MP	3 inches	100 to 1600	18-55mm f/3.5-5.6G VR lens	3fps	30 to 1/4,000 seconds
	Pentax K-X MSRP: \$649.95* SKU 9555787	12.4MP	2.7 inches	200 to 6400	18-55mm	4.7fps	30 to 1/6,000 seconds
	Canon EOS Rebel T1i MSRP: \$749.99* SKU 9318954	15.1MP	3 inches	100 to 3200	EF-S 18-55mm f/3.5-5.6 IS lens	3.4fps	30 to 1/4,000 seconds
	Olympus EP-1 MSRP: \$799.99* SKU 9463573	12.3MP	3 inches	100 to 6400	14-42mm f/3.5-5.6 lens	3fps	60 to 1/4,000 seconds
	Panasonic Lumix L10K MSRP: \$1,299.95* SKU 8815464	10.1MP	2.5 inches	100 to 1600	14mm-50mm f/3.5-f/5.6	3fps to card capacity	60 to 1/4,000 seconds
	Canon EOS 7D MSRP: \$1,699* SKU 9491944	18MP	3 inches	100 to 6400	N/A (body only)	8fps	1/60 to 1/8,000 second
	Nikon D300s MSRP: \$1,699.95* SKU 9457349	12.3MP	3 inches	200 to 3200	N/A (body only)	7fps	30 to 1/8,000 seconds

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which Digital Camcorder Is Best For You?

Digital camcorders come in a number of formats: DVD, hard drive, flash drive, MiniDV, and high definition are the most common. By comparing the following digital camcorders, you can determine which recording format and product best fit your style.

		LCD size	Optical zoom; Digital zoom	Recording speeds	Memory card	Digital still resolution	Lines of resolution
What It Means		Diagonal length of viewing screen	Two methods for magnifying depth of field; optical zoom is better	The speeds a particular camcorder can utilize during recording	Compatible flash card types (cards not included unless noted)	The number of megapixels the camcorder can capture in still images	Number of lines of horizontal resolution; the higher the number, the greater the detail
High-Definition	Flash Drive						
	 Samsung SMX-F34BN MSRP: \$279.99* SKU 9267189	2.7 inches	34X; 1,200X	SP	SD/SDHC/MMC	N/A	480
	 Canon FS200 MSRP: \$329.99* SKU 9244203	2.7 inches	37X; 2,000X	XP/SP/LP	SD/SDHC	N/A	480
	 Samsung HMX-H104 MSRP: \$579.99* SKU 9369765	2.7 inches	10X; 100X	N/A	SD/SDHC	N/A	1,080
	 Canon VIXIA HF20 MSRP: \$799.99* SKU 9239512	2.7 inches	15X; 300X	MXP/FXP/XP+/SP/LP	SD/SDHC	3.3MP	1,080
	 Sony HDR-CX500V MSRP: \$1,099.99* SKU 9403497	3 inches	12X; 150X	FH/HQ/SP/LP	Memory Stick PRO Duo	12MP	1,080
Hard Drive	 JVC Everio GZ-HD300 MSRP: \$699.95* SKU 9186141	2.7 inches	20X; 200X	UXP/XP/SP/EP	microSD/SDHC	N/A	1,080
	 Panasonic HDC-HS250 MSRP: \$899.95* SKU 9206995	2.7 inches	12X; 700X	HA/HG/HX/HE	SD/SDHC	10.6MP	1,080
	 Sony DCR-SR47 MSRP: \$349.99* SKU 9178258	2.7 inches	60X; 2,000X	HQ/SP/LP	Memory Stick PRO Duo	0.3MP	480






















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Find The Nikon COOLPIX That Fits Your Life



At the heart of the image™

Nikon's COOLPIX cameras won't let you miss the joy in life, thanks to their fast start-up time, shutter speed, and auto focus. Each COOLPIX offers an ultra-compact and stylish design that will deliver sharp and colorful photo results with its NIKKOR lens. With a wide range of Nikon COOLPIX cameras available, it couldn't be easier to find a camera that can keep up with your photography needs.

Product Name SKU	Nikon COOLPIX L20 9220167	Nikon COOLPIX S220 9220185	Nikon COOLPIX S570 9455369	Nikon COOLPIX S230 9220201	Nikon COOLPIX L100 9220229	Nikon COOLPIX S630 9223734	Nikon COOLPIX S70 9455412	Nikon COOLPIX P90 9223743
Additional Col- ors Available		   	   	   		   	 	
MSRP	\$119.95*	\$149.95*	\$199.95*	\$179.95*	\$229.95*	\$249.95*	\$349.95*	\$399.95*
Resolution	10MP	10MP	12MP	10MP	10MP	12MP	12MP	12.1MP
Zoom	3.6X optical; 4X digital	3X optical; 4X digital	5X optical; 4X digital	3X optical; 4X digital	15X optical; 4X digital	7X optical; 4X digital	5X optical; 4X digital	24X optical; 4X digital
LCD Monitor	3 inches	2.5 inches	2.7 inches	3 inches	3 inches	2.7 inches	3.5-inch OLED	3-inch tilt and swivel LCD
Internal Memory & Compatible Cards	20MB internal & SD/SDHC	44MB internal & SD/SDHC	47MB internal & SD/SDHC	44MB internal & SD/SDHC	44MB internal & SD/SDHC	44MB internal & SD/SDHC	20MB internal & SD/SDHC	47MB internal & SD/SDHC
ISO	Up to 1600	Up to 2000	Up to 3200	Up to 2000	Up to 3200	Up to 6400	Up to 6400	Up to 6400
Shooting Modes	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 17 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 17 Scene Modes, plus Auto	16 Scene Modes, Programmed Auto, Shutter- Priority Auto, Aperture- priority Auto, and Manual
Movie Mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes (HD)	Yes
Touch-Panel Control	No	No	No	Yes	No	No	Yes	No
Battery Type	2 AA batteries	Li-Ion recharge- able battery	Li-Ion recharge- able battery	Li-Ion recharge- able battery	4 AA batteries	Li-Ion recharge- able battery	Li-Ion recharge- able battery	Li-Ion recharge- able battery
Battery Life	240 shots with alkaline, 630 shots lithium- ion	180 shots	220 shots	160 shots	350 shots with alkaline, 900 shots lithium- ion	220 shots	200 shots	200 shots

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FirstGlimpse

Expand Your Creativity With A Nikon D-SLR



As you step up to a D-SLR from a point-and-shoot, new opportunities for expanding the creativity in your photos accompany higher image quality and faster shutter response. Nikon's D-SLRs are easy to use, with a host of features to help you achieve outstanding images, including in-camera editing. Whether you're new to D-SLR picture-taking or ready to upgrade your current D-SLR, Nikon has a camera to exceed expectations.

Product Name SKU	Nikon D3000 Kit 9456803	Nikon D5000 Kit 9311755	Nikon D90 Kit 8975184	Nikon D300S Body 9457349	Nikon D700 Body 8928985
					
Estimated Street Price	\$549.95*	\$749.95*	\$1,199.95*	\$1,699.95*	\$2,699.95*
Compatible Lenses (for all functions)†	AF-S or AF-I lenses	AF-S or AF-I lenses	AF NIKKOR lenses (AF-I, AF-S, DX, VR, and D-/G)	AF NIKKOR lenses (AF-I, AF-S, DX, VR, and D-/G)	AF NIKKOR lenses (AF-I, AF-S, DX, VR, and D-/G)
Included Lenses	18-55mm NIKKOR VR Image Stabilization Lens	18-55mm NIKKOR VR Image Stabilization Lens	18-105mm NIKKOR VR Image Stabilization Lens	Available separately	Available separately
LCD Monitor	3 inches 230K-dot Resolution	2.7 inches Vari-angle 230K-dot Resolution	3 inches 921K-dot Resolution	3 inches 921K-dot Resolution	3 inches 921K-dot Resolution
Resolution	10.2MP	12.3MP	12.3MP	12.3MP	12.1MP
Sensor Type	DX-format CCD	DX-format CMOS	DX-format CMOS	DX-format CMOS	FX-format CMOS
Low-Noise ISO Sensitivity	100 to 1600 (expanded 3200)	200 to 3200 (expanded 100 and 6400)	200 to 3200 (expanded 100 and 6400)	200 to 3200 (expanded 100 and 6400)	200 to 6400 (expanded 100, 12800, and 25600)
Shutter Speed	30 to 1/4,000 seconds	30 to 1/4,000 seconds	30 to 1/4,000 seconds	30 to 1/8,000 seconds	30 to 1/8,000 seconds
Built-in Flash	Yes (automatic or user-activated)	Yes (automatic or user-activated)	Yes (automatic or user-activated)	Yes (user-activated)	Yes (user-activated)
Burst Mode	Up to 3fps	Up to 4fps	Up to 4.5fps	Up to 7fps	Up to 5fps
Picture Control Settings	Standard, Neutral, Vivid, Monochrome Portrait, and Landscape	Nine customizable plus Standard, Portrait, Landscape	Nine customizable plus Standard, Portrait, Landscape, and more	Nine customizable plus Standard, Neutral, Vivid, Monochrome, and more	Nine customizable plus Standard, Neutral, Vivid, Monochrome, and more
In-Camera Editing Features	13 Functions, including: Trim, Red-eye correction, Soft Filter, and more	16 Functions, including: Trim, D-Lighting, Red-eye correction, Image Overlay, and more	13 Functions, including: Trim, D-Lighting, Image Overlay, Monochrome, and more	10 Functions, including: Trim, Monochrome, D-Lighting, Filter Effects, Edit Movie, and more	7 Functions, including: Trim, D-Lighting, Image Overlay, Filter Effects, Monochrome, and more
HD Movie Mode	(Stop-Motion Movie Mode only)	Yes with Sound	Yes with Sound	Yes with Sound and Stereo Mic Input	No
Compatible Storage Media	SD, SDHC	SD, SDHC	SD, SDHC	CompactFlash Type I/II; SD and SDHC	CompactFlash Type I
Included Battery	EN-EL9a Lithium-ion Rechargeable Battery	EN-EL9a Lithium-ion Rechargeable Battery	EN-EL3e Lithium-ion Rechargeable Battery	EN-EL3e Lithium-ion Rechargeable Battery	EN-EL3e Lithium-ion Rechargeable Battery
Battery Life (shots per charge)	500 (CIPA)	510 (CIPA)	850 (CIPA)	950 (CIPA); 3,000 (Nikon Standard)	1,000 (CIPA)

* Prices listed in this issue are for general reference and may vary from retailer pricing.

† For complete compatibility see www.nikonusa.com.

FirstGlimpse



Digital Imaging Glossary

A

Are you confused about what the lingo on camera boxes means? Use this glossary to help decode the world of digital imaging.

aperture—An iris-like diaphragm opening that can expand and contract the lens to let you control the amount of light that passes through it, thus affecting the exposure. The term “f-stop” is used interchangeably with aperture.

burst mode—A camera mode that lets you capture several shots consecutively after pressing the shutter only once.

CCD—A charge-coupled device is the camera’s image-sensing component. It converts light into energy that can be stored as digital data on your camera.

depth of field—The area that is in focus in front of and beyond the subject of your photo.

digital zoom—Magnifies an image digitally by cropping it and filling in the rest with interpolated pixels, thus degrading the quality. Even if the numbers are impressive, never choose a camera based on digital zoom.

f-stop—See aperture. Smaller f-stop numbers mean a wider lens opening; larger f-stop numbers mean a narrower lens opening.

ISO—For digital cameras, the ISO setting measures the sensitivity to light (similar to how it does with film). Digital camera ISO settings, such as 200, 400, etc., should capture photos as if one were using film with such a speed. Lower ISO settings mean you need more light and vice versa.

LCD—The screen on the back of the camera that lets you see a live-action view of your subject or your photo after you’ve taken it.

lens—The apparatus on the front of the camera that gathers and directs light toward the imaging device. In a digital camera, the lens probably has both an optical and digital zoom.

megapixel—Approximately 1 million pixels. The higher the megapixel count, the higher the resolution and the more you can crop, which means (in general) better-quality photos.

memory card—Because digital cameras have very little onboard memory, they need flash memory cards to store more than a dozen or so images. The type of memory card you need depends on the make and model of your camera. Some of the most popular memory cards are Secure Digital, MultiMedia Card, Compact Flash, and Sony Memory Sticks. In general, memory cards are quite small.

noise—The small statistical variations among pixels that lead to (usually) minor distortions of color in a photo.

optical zoom—The camera’s mechanical ability to move the lens physically closer to your subject. With optical zoom, the higher the number (such as 5X or 10X), the better. When choosing a camera, always consider the optical zoom, not the digital zoom. Digital zoom artificially adds pixels.

resolution—The number of pixels in an image. The higher the resolution, the more detail and quality in a photo. Resolution is measured in a proportion (such as 2,272 x 1,704).

shutter—A mechanism that opens and closes to allow light to pass through the lens. You can usually control the camera’s shutter speed.

shutter speed—The length of time a camera’s shutter is open to let light through the lens to hit the sensor, which records the image. This is expressed in fractions of a second: For instance, a shutter speed of 1/250 means that the shutter is open for 1/250th of a second.

viewfinder—The small opening in the camera that the user looks through to frame a shot. Some digital cameras don’t have a viewfinder and use only the camera’s LCD to frame the shot.

white balance—Light levels are adjusted electronically to ensure whites in a certain environment are pure, leading to more lifelike colors. White balance can usually be manually adjusted, too. **FC**

NOTEWORTHY

Accessories & Services

Prices for digital camcorders and cameras continue to fall as their video and picture quality improves, which is especially good news for first-time buyers or those looking to upgrade. Pairing your new camcorder or camera with the right products will bring you better photography results. Here are some must-have accessories you should consider buying to get the most out of your digital imaging device. **FC**



UV FILTER

- Protects digital camcorder and D-SLR lenses from dust, dirt, fingerprints, and scratches
- Get clearer, more detailed videos or photographs when you're shooting in bright conditions



ADDITIONAL LENSES/CONVERTER LENSES

- Extra lenses for D-SLRs and converter lenses for digital camcorders can enhance your results by extending your field of view, reducing glare, and more
- Telephoto lenses enable you to zoom in from far away; wide-angle lenses give you the ability to get a full view even if you're close to the subject; and macro lenses will let you achieve up-close, detailed shots of your photo subject



EXTRA MEDIA

- Keep spare memory cards on hand so you can snap away without having to worry about running out of storage space
- Consider having several memory cards with smaller capacities instead of one card with a larger capacity; that way, if something goes wrong with one, you'll still have a backup
- For your digital camcorder, keep more recording media in your bag than you think you'll need, just in case



EXTERNAL FLASH

- Light up your subjects from greater distances
- Offer better control of lighting conditions when taking photos by directing the angle of the flash



SPARE BATTERIES & CHARGERS

- Make sure you're never caught without the power needed to capture the perfect moment
- Whether your camera uses proprietary batteries or AAs, keep at least one fully charged spare or set in your camera bag
- An additional battery charger will give you the flexibility to power up your camera batteries anywhere you're headed, even if you're traveling



REMOTE SWITCH

- A longer cable lets you snap photos without having to touch the camera, which can also reduce camera shake
- May enable the user to lock the shutter for longer exposure times



DIGITAL IMAGING SERVICES

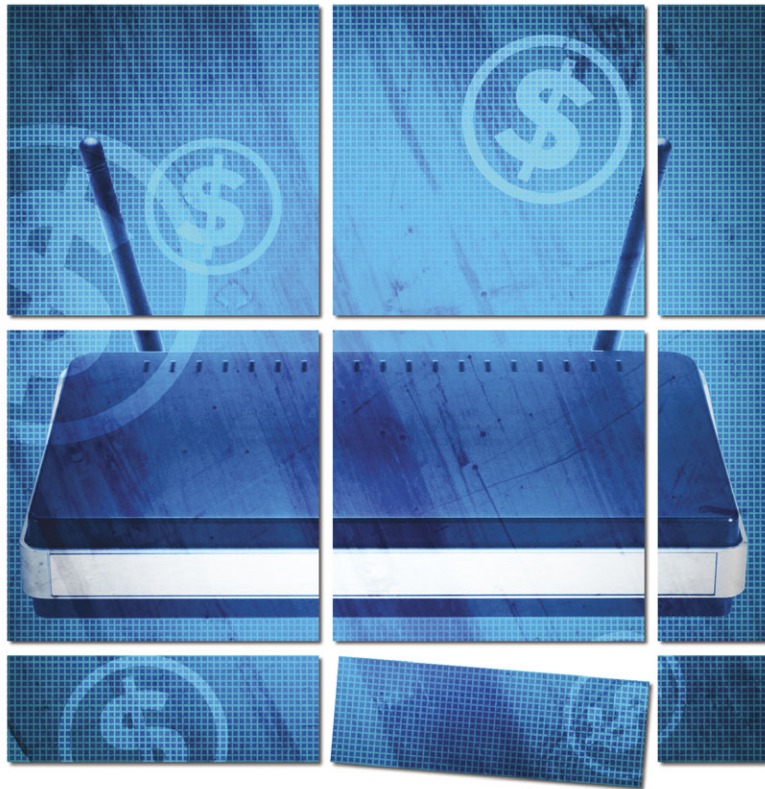
Once you've set your sights on the camera or camcorder you want, consider taking advantage of the digital imaging services offered by your local CE retailer. Not only can you protect your investment, but you can also discover photography and videography skills that will make your photos and videos picture-perfect.

- D-SLR or Camcorder Service Plan
- D-SLR Training Course
- Camcorder Training Course



TRIPOD

- Tripods are an easy way to ensure steady video footage
- Pan while recording video in one smooth motion
- Use a tripod and your camera's timer to get a picture of the entire group without needing someone to man the camera
- Keeps your camera steady while you're shooting close-up or distance shots, which can prevent photo blurring



HOW TO BUY A Router

The Key To Your Home Network

We talk a lot about the devices that can access your home network, including computers, printers, mobile phones, and Internet-connected HDTVs. But none of them are capable of controlling how the Internet is delivered throughout your home. That job falls to your router.

Routers are available in both wired and wireless models, but the term “wireless router” is a bit of a misnomer, because nearly all wireless routers also feature three or four wired ports. Investing in a wireless router is generally the wisest move, unless you don’t own and don’t plan on using devices that wirelessly connect to the Internet. To help you choose a wireless router that best

matches your needs, keep the following factors in mind.

Going For Speed

Wireless models are available in 802.11g and 802.11n options. The newest standard, 802.11n, supports faster data transfer speeds up to 300Mbps, compared to 802.11g’s 54Mbps. If you enjoy listening to Internet radio or watching online videos, you’ll need a wireless router with 802.11n’s fast data transfer speed for consistent playback quality. With an 802.11g router, online media may play back choppy or not at all. 802.11n routers are also backward-compatible with 802.11b/g devices, and some models can work with older 802.11a wireless equipment. Thus, you won’t necessarily have to upgrade your

Router Review

- Nearly all wireless routers also offer some wired ports.
- 802.11n routers deliver Wi-Fi faster than 802.11g routers.
- Wireless routers with MIMO technology feature a longer range and improved signal strength.
- A model with a built-in firewall will help keep cybercriminals from reaching your PCs.

existing hardware, unless you need it to receive Wi-Fi at 802.11n speeds.

Going The Distance

If your current router has trouble distributing Wi-Fi (or Wi-Fi at an adequate speed) to every room in your house, look for a model that has two or three antennas and MIMO (Multiple Input, Multiple Output) technology. These features can increase the range and reliability of your Wi-Fi signal, improving the distribution of Wi-Fi across large houses or to devices that are far away from the router.

Built-in Security Options

A router with a built-in firewall can prevent hackers and viruses from entering your network by inspecting the data and blocking dangerous elements. If security is critical, you’ll want to spend a little more for a router with an integrated firewall.

And to keep your Wi-Fi signal private, wireless routers feature a variety of signal encryption options, such as WPA (Wi-Fi Protected Access), WPA2, and WEP (Wired Equivalent Policy). To easily integrate your router’s security setup, some models offer a push-button configuration, such as WPS (Wi-Fi Protected Setup), so you won’t need to manually enter long codes or passwords as you would with the previously listed encryption options. **PG**

BY NATHAN LAKE

Wireless Comfort & Productivity

Microsoft's Wireless Comfort Desktop 5000

The modern working world is one that's free of wires. From mobile phones to computer peripherals, such as Microsoft's Wireless Comfort Desktop 5000 keyboard and mouse (\$79.95; www.microsoft.com/hardware), wireless technology offers you the freedom of not being tied to one location. With a wireless mouse and keyboard, you'll have the flexibility to control your PC away from your desk (up to 30 feet away)—which is especially convenient for anyone who uses her computer for video and music entertainment because you can control your media's playback from a distance. Designed to be productive and easy on your hands, Microsoft's Wireless Comfort Desktop 5000 set will provide computing conveniences that you won't find in a typical wireless mouse and keyboard.

A Keyboard Designed For Windows 7

Windows 7 allows you to pin your favorite applications, folders, and files to the Taskbar as well as rearrange your icons in any particular order. To further simplify access to your most commonly used files and programs, the Wireless Comfort Desktop 5000 keyboard features a row of hotkeys, called Taskbar Favorites, that will maximize open items in the Taskbar with the touch of a single key. Thus, you won't even need to move your mouse to switch between applications. The keyboard also offers one-touch access keys to launch your Web browser, load Windows Mail, open the

Documents or Pictures folders, start Windows Media Player, and control media playback.

With Microsoft's Comfort Curve and movable feet, your hands and wrists will naturally be placed on the keyboard in a relaxed position, helping relieve strain that can happen after typing for long periods of time. A soft-touch palm rest is also included to further promote ergonomic use. Additionally, the Wireless Comfort Desktop 5000 keyboard's responsive, quiet-touch keys will be easier on your hands as you type.

Microsoft's Flexible & Fruitful Mouse

Windows Flip is a Windows 7 feature that shows thumbnail images of each Desktop window you have open and allows you to select the window you

Benefits

- Keyboard hotkeys to quickly access Windows 7 Taskbar items and apps
- Ergonomist-approved Comfort Curve keyboard design and quiet-touch keys
- Mouse with one-touch access to Windows Flip as well as 4-way scrolling to scroll through items up-and-down and side-to-side
- BlueTrack Technology allows you to mouse on nearly any surface (except clear glass and mirrored surfaces)

want to access. To help you take better advantage of this utility, the Wireless Mouse 5000 offers quick and convenient access to Windows Flip. Simply press down on the mouse's scroll wheel and scroll until you find the window you want to work with. Thanks to 4-way scrolling, the scroll wheel can also tilt to the left or right for side-to-side scrolling, which is ideal for horizontally scrolling through photos or wide spreadsheets.

The Wireless Mouse 5000 doesn't need to be paired with a mousepad because it features Microsoft's BlueTrack Technology. This allows the mouse to operate on almost any surface, such as carpet, wood tables, and granite countertops (but not clear glass or mirrored surfaces). And the Wireless Mouse 5000 features an ambidextrous shape and soft rubber side grips for added comfort. **FG**



Microsoft's Wireless
Comfort Desktop 5000
\$79.95 • www.microsoft.com/hardware

FirstGlimpse

A PC That Won't Crawl

When You Have A Need For Speed



Rule of thumb maintains that a PC bought fresh off the line will be obsolete in three years. Or, if not obsolete, showing its age performance-wise. It isn't that the computer loses processing power, but rather that operating systems and programs invariably become more resource-hungry as

they continue to develop.

As you look for a new computer, keep these considerations in mind:

CPU. If your needs are relatively light—say, running office software—a fast single- or dual-core processor should keep you humming along happily. If you'll also be working with video and audio files, then a quad-core machine will be the wiser investment.

Memory. Don't skimp here. The more memory your PC has available, the more breathing space it has to work. Doubling the stock memory, or better, is the single best performance booster you can give your PC. A computer with free RAM slots will let you add memory as the demands upon it increase in the future.

Hard drive. A common cause of flagging computer performance is too little free space on the hard drive. Music and video files alone can consume hard drive space at a rapid rate. As a good margin of safety, your drive should always have a minimum free space of 10GB or 10%, whichever is smaller—or more if you burn CDs or DVDs, which usually requires temporary free space equal to the size of the material you're burning.

If you're shopping for a desktop PC, choose one with open drive bays so you can add internal drives as needed. This is a better option than expanding onto external USB drives, as internal drives will deliver faster read/write speeds.

Additional expansions. Given the increasing importance of wireless connectivity, be sure you can add the necessary cards to communicate with Wi-Fi and Bluetooth devices, if they aren't already built into your machine. And if visual imaging or gaming is a priority, you may want to be able to upgrade the graphics card or add another.

With some forward thinking, you can be sure your new computer will deliver peak performance for years to come. **FG**

BY BRIAN HODGE



Sometimes Less Is More

PCs often leave the factory front-loaded with trial software and other programs you may never want or need. This doesn't just gobble up hard drive space; it can also bog down your computer's performance.

The solution? Start from scratch by erasing the drive and reinstalling just the system software.

If you'd rather not tackle that job yourself, check with a CE retailer. Some computer dealers will, for a nominal fee, strip out the junk so you can take home a leaner, more nimble machine. ●

Fast, Reliable & Easy Printing

Epson's WorkForce 610 All-In-One Printer



When it comes to printers, your machine should be fast, reliable, and easy to use, especially if you're not only printing,

but copying, scanning, and faxing. Whether you need a reliable printer for your home business or family, the Epson WorkForce 610 (\$199.99; www.epson.com) will deliver.

Speed & Efficiency

The Epson WorkForce 610 is no slouch when it comes to high-speed printing. Because it is a technology-leading inkjet printer, the 30-page Auto Document Feeder prints as fast as 15.0 ISO PPM in black and 9.3 ISO PPM in color. This is up to 2 times faster than competitive all-in-ones. ISO PPM is the new "apples-to-apples" speed standard that is now being used by all major printer manufacturers.

With built-in Wi-Fi and Ethernet connectivity, you can use the all-in-one printer with multiple computers via a home network. You can also select and print images from memory cards you've inserted into the Epson WorkForce 610.

Professional Quality

Featuring individual ink cartridges, the Epson WorkForce 610 lets you choose between a high-capacity and

Epson WorkForce 610
All-In-One Printer
\$199.99
www.epson.com



extra-high capacity black ink cartridge, depending upon your printing needs. When you need to print high-quality color brochures or even photos, the DURABrite Ultra Ink will create fade-, smudge-, and water-resistant images. The Epson WorkForce 610's inks offer a great way to protect important documents and photos.

Compared to laser printers, the Epson WorkForce 610 All-In-One printer also cuts down on costs and energy consumption. Using the two-sided manual printing option, you'll cut your paper use in half. And the Epson WorkForce 610 uses up to 70% less energy than most laser printers.

Smart Features

Employing advanced MicroPiezo print head technology, the Epson WorkForce 610 will quickly print documents at the highest quality. Epson's ink nozzles precisely pinpoint and deliver ink droplets in three different sizes on paper for an accurate, laser-quality print job.

Think Before You Ink

There are plenty of words to describe the Epson WorkForce 610 All-In-One printer, but you can start with a few adjectives that illustrate the essence of what an inkjet printer should be: fast, reliable, and easy to use. **EG**

Graphically Speaking

What To Look For When Purchasing A Video Card



A computer gamer must have one to play titles at the highest settings; a video editor needs one to quickly render effects; and a media-center PC owner wants one to play HD content from his PC onto his home theater. A video card is just the trick for anyone who wants to improve her PC's ability to process high-end graphics and display content at high resolutions. To help you pick a video card that suits your upgrade needs, we'll explain the specifications you should look for.

It's A PCI-E World

The technology surrounding graphics cards changes quickly, but one thing that hasn't changed is the popularity of the PCI-E (Peripheral Component Interconnect Express) x16 interface, which is the connector type found on nearly all graphics cards manufactured within the past two years. If you have a computer

that requires an older AGP- or PCI-based graphics card, you may want to upgrade your PC.

Video Memory

Similar to your computer, a graphics card comes with its own memory, so it can store video data and effectively render images at millions of pixels per second. The more memory the video card offers, the higher the video resolution your PC can handle. That being said, if you don't play video games at the highest settings or render video at HD quality, a graphics card with 512MB of video memory or less will be sufficient. Graphics cards also feature an internal processor. Look for a card with a core clock with better than 500MHz clock speed for best results.

Teamwork

If your computer supports Nvidia's SLI or ATI's CrossFireX, which allow you to use two (or more) identical Nvidia- or

Buying Tips

- Check your computer's connector type: Most use the PCI-E interface.
- The amount of video memory you'll need depends on how you use your computer.
- Consider getting a card that lets you use two identical cards for better graphics rendering.
- Make sure the video card's outputs will match your computing needs.

ATI-based graphics cards as one video-crunching device, you can install two cards and further improve the graphics performance on your PC. Additionally, some video cards feature two GPUs (graphics processor units)—think of it as a dual-core processor for video—to deliver dual GPU performance from a single video card. The most recently released graphics cards are also designed to perform HD video decoding, taking some calculation duties away from the processor. If you want the most realistic color and video quality, look for a graphics card that supports HD video playback.

Video Output

Nearly all current graphics cards offer two dual-link DVI (Digital Visual Interface) outputs, which let you hook up two monitors and span your Windows Desktop across both screens. The digital DVI output is superior to the analog VGA (Video Graphics Array) interface found on older computers and monitors.

If you're looking to quickly hook up your PC to an HDTV, you should look for a graphics card with an HDMI output, which provides the DVI's all-digital, uncompressed video quality as well as the ability to carry digital audio. High-end graphics cards also support HD resolutions, so your PC will deliver the same quality as your other HD devices. **EG**

BY NATHAN LAKE

Top 10 Things To Know About Networking

Keep It Simple, Safe & Speedy

Setting up a wired or wireless network at home or networking while on the road only requires a few components. At the core of any network is the router, a central hub through which all the connected devices communicate and access Internet service. On a wired network, devices connect via a high-speed cable called Ethernet cable. On a wireless network, computers connect through the Wi-Fi protocol, although Wi-Fi routers often include a few Ethernet ports, as well.

Once everything is set up, there are a few additional things you should take into consideration. These 10 tips will help keep your network operations running smoothly.

1 Tell your computer what you want to share.

Networking lets you access files and additional resources on other computers connected to the same network. But you can do this only after you've enabled File Sharing in your computer's Control Panel (Windows) or System Preferences (Macs).

2 Consolidate your setup with network-ready peripheral devices.

Some printers, scanners, and external hard drives let you connect them to a network router. This way, a single device is available to all network users instead of needing one at each computer.

3 For optimal performance, set your Wi-Fi router to 802.11n.

Wi-Fi, whose technical label is 802.11, uses four possible standards: a, b, g, and n. The latest standard is 802.11n, which provides the best combination of transmission speed, range, security, and flexibility.

4 If your Wi-Fi router supports it, use the 5GHz frequency.

Most wireless networks use the 2.4GHz frequency, which numerous other gadgets (cordless phones, game controllers, Bluetooth devices, microwave ovens, and more), also use. Too many competing devices can cause signal interference in the form of slowdowns and dropouts. However, many routers now offer a 5GHz option, which is much less crowded.

5 Keep your Wi-Fi network private by activating your router's password-protected encryption.

This will prevent strangers from using your Internet service by wirelessly connecting to your network. Such uninvited guests will, at the very least, leech part of your bandwidth but may also have more nefarious schemes in mind—for example, exploring files on your hard drive or using your service for illegal activity.

6 For protection from outside attacks, use your router firewall instead of your computer firewall.

A home computer only needs one firewall to protect it from external threats. Generally, router firewalls are more powerful than their software counterparts and won't impede traffic within your network.

7 If you are worried about internal threats, you'll need a software firewall.

Router firewalls only monitor inbound communication. If you're apprehensive about spyware or other malware sending out information about you, a software firewall will monitor outgoing traffic and alert you to unexpected communication.

8 Network connections can stop working every once in awhile.

Network connections will inexplicably fail sometimes but can usually be restored simply by turning off your router for a few moments and then turning it back on. If Internet access is affected (and it isn't your service provider's fault), turn off your modem, too; after its connection is re-established, turn your router back on.

9 For networking while traveling, be prepared by bringing the proper hardware.

A notebook computer with built-in Wi-Fi will let you join wireless networks (also known as hotspots) just about anywhere. But bring along a short Ethernet cable, too, in case unforeseen circumstances require you to make a wired connection.

10 When networking in public, disable File and Printer Sharing.

Chances are you don't need these in, say, a coffeehouse. So turn them off. On a public network, hackers could use these open settings to exploit your computer. **FG**

BY BRIAN HODGE

Photo & Video Projects Made Easy

Let Your Creativity Flow
With Corel Digital Studio 2010



Corel Digital Studio 2010 (\$99.99; www.corel.com) gives you the tools you need to unearth the pictures and videos left idle

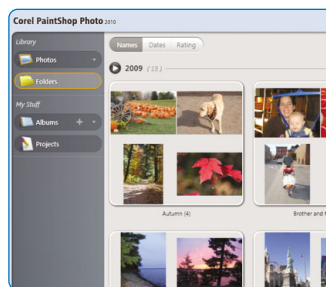
on your hard drive and turn them into memorable projects you can share with friends and family. The suite includes four applications that anyone in the family can use: PaintShop Photo Express 2010 to create photo masterpieces, VideoStudio Express 2010 to make standard- or high-definition video creations, Corel WinDVD 2010 to watch your home movie projects and favorite DVDs, and Corel DVD Factory 2010 to burn your self-made media to disc to share with friends and family.

Intuitive Interface

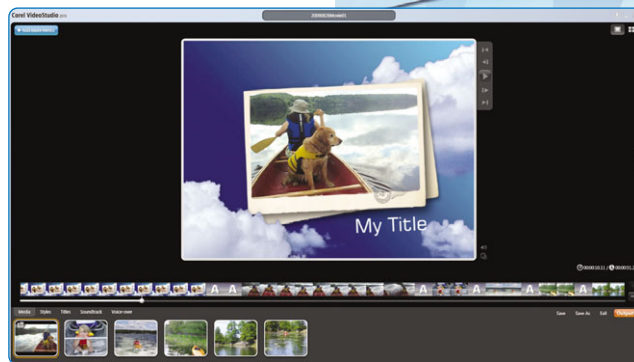
With Corel Digital Studio 2010, your focus will remain on creating projects rather than learning how to use the software. Each application shares the same user-friendly interface, so once you know how to use one program, you will know how to use them all. With an uncomplicated design and easy-to-read icons, you'll find it fun and easy to act as your family's memory keeper.

Unique Projects In Seconds

It only takes a few clicks to design your own personal photo projects with the



No matter which application you're using, all of your pictures, videos, and music are easily accessible in the Media Organizer, where you can view, edit, and categorize your media.



Anyone in the family can create professional-looking home movies with the drag-and-drop simplicity of Corel's VideoStudio Express.

Create Priceless Memories

Whether you plan to use it for yourself and your family or give it as a special gift, Corel's Digital Studio 2010 offers plenty of project possibilities:

- Photo books
- Cards
- Photo collages
- Calendars
- Slideshows
- Home movies
- Video discs
- Audio discs
- Backup discs

What's Included With Corel Digital Studio 2010?

The Corel Digital Studio 2010 suite includes the following to help you create your own personal photo and video works of art.

Application	What You Can Do With It
Corel PaintShop Photo Express 2010	<ul style="list-style-type: none"> Organize photos, videos, and music in one place Edit photos automatically or manually Create photo projects such as photo books, cards, and calendars Instantly share photos on Facebook, Flickr, and YouTube
Corel VideoStudio Express 2010	<ul style="list-style-type: none"> Easily edit videos and use templates to create home movies Fix insufficient lighting or video shakiness Add titles, transitions, music, and credits to personalize your movie Burn movies to DVDs and CDs or share via YouTube
Corel DVD Factory 2010	<ul style="list-style-type: none"> Burn DVDs in just a few steps Convert your home movies to work on your iPod, iPhone, PlayStation Portable, or other mobile device Back up digital media on CD or DVD for safekeeping
Corel WinDVD 2010	<ul style="list-style-type: none"> Play home movies or regular movies in standard- or high-definition video Watch video in DVD, QuickTime, Windows Media, M2T, and M2TS file formats Bookmark your favorite movie scenes so that you can watch them later

included PaintShop Photo Express, so even the younger members in your family can create photo books and slideshows with ease. PaintShop Photo Express will even make automatic photo corrections, such as brightness, contrast, and sharpness, with the click of a button. This will help you hang on to perfect-looking memories from the holidays to reflect upon in the years to come.

Using VideoStudio Express, professional-looking home movies are easy to assemble thanks to drag-and-drop and single-click video-editing techniques. Once the software has automatically detected a memory card, camera, mobile phone, or video camcorder is connected, it will import your video to save as short clips. From there, you can start selecting shots from your New Year's

Eve gathering to place on the visual timeline and personalize your project even more by adding titles, voice tracks, and transitions.

Media Organizer

When you're working with PaintShop Photo Express or VideoStudio Express, every picture, video, or music file you keep on your computer, mobile phone, digital camera memory card, or camcorder is conveniently kept in one place and can be accessed with the Media Organizer. This feature allows you to view and organize your media files a number of different ways, whether by album, folder, date, or name. You can also add tags or caption text to your files, making it easier to find that unforgettable shot of your son's first bite of birthday cake.

Whether you've recorded video of the kids playing tag with your digital camcorder or snapped pictures with your mobile phone while you were out for a night on the town, you can import your captured memories into the Media Organizer. This becomes useful when the mood strikes you to create a one-of-a-kind project because your pictures, videos, and music will be ready to go.

Fast & Simple Sharing

Corel Digital Studio 2010 makes it easy to show off your daughter's first steps or your dog's latest trick with its integrated Share option. This feature will directly send your creations to Facebook, Flickr, or YouTube for all to see. But the sharing doesn't stop there. The included Corel WinDVD lets you instantly watch your slideshows and videos whether they're saved on a disc or as a file. And, if you're looking for the perfect gift, you can use Digital Studio 2010 to print your photo projects at home or order them online, while the Corel DVD Factory makes it easy to burn your projects to a CD or DVD that you can give to others. **PG**

Preserve Your Analog Past

Save Your Old Home Videos With Roxio Easy VHS To DVD

There are some videos that are too precious to lose, such as your kids' first steps and your wedding ceremony. But as technology changes, the formats and media we use to archive those once-in-a-lifetime events are no longer viable. With three simple steps, Roxio Easy VHS To DVD (\$59.99, SKU: 9213656; www.roxio.com) is designed to help you preserve the home videos you have stored on tape, such as VHS, Hi8, and V8, by recording them to DVD. And Roxio Easy VHS to DVD is also available for Macs (\$79.99, SKU: 9466151).



Step 1: Make The Connection

Included with the Easy VHS to DVD is a Video Capture USB device that lets you directly connect your VCR or analog camcorder to your PC. On one end is a USB plug and on the other are S-Video and Composite video connectors, as well as stereo RCA connectors. Unlike similar tape-to-DVD converter options, there's no need to physically install hardware inside your PC. Simply dust off your old VCR or camcorder, load your tape, and connect it to your PC.

Step 2: Capture The Video

With just a few clicks, Roxio Easy VHS to DVD software lets you select particular clips from your analog video to burn to DVD. You can either capture the entire tape or break your recording into clip sections. Additionally, you can add titles, background music, transitions, and automatically fix video color, contrast, or brightness to enhance your video or choose to burn your tape footage directly to disc.

Step 3: Preserve & Share

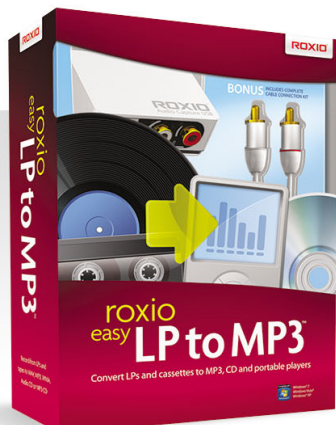
Once you've put a shine on your old home movies, you have plenty of sharing options. You can burn a DVD to give as a gift, share the clips with friends and family using your private Roxio Web page, or post the video on video-sharing Web sites such as YouTube and Dailymotion.com. You can also convert your video so that it can be played on your mobile devices, such as an iPod with video capabilities or a PlayStation Portable, for all to see.

Look Toward The Future

By using Roxio Easy VHS To DVD, you can be sure your memories are always ready for you, so you can re-live your favorites or share them with other family members. But more importantly, you're also making sure they're preserved for those generations yet to come.

Convert Vinyl LPs & Cassettes To MP3

If you have a garage full of old LPs or tapes collecting dust, Roxio Easy LP to MP3 (\$69.99, SKU: 9511192) gives you the ability to digitize your analog audio sources to MP3 files and clean up the sound of your original recordings, such as removing clicks, pops, and hisses. It includes a complete cable connection kit to convert your LPs and cassettes into high-quality digital audio. ●



FirstGlimpse

Uninterruptible Power Supplies

Battery Backup & Data Loss Prevention For Your PC

If there's an electrical surge or spike caused by a power station malfunction or a lightning strike, a surge protector can help prevent damage to your computer's hardware. But what can you do to prepare for a power outage? Adding a UPS (uninterruptible power supply) to your computer will keep your system running after the power has gone out, giving you time to turn it off to avoid component damage or data loss.

What Is A UPS?

Also known as battery backups, UPSes serve as a secondary power source that can keep your computer continuously powered in the event of a blackout. Without the protection a UPS provides, a sudden power failure could cause you to lose any unsaved documents. However, by connecting a UPS to your PC via a USB or RS-232 serial port, your computer will remain powered long enough for you to save the progress you've made on projects and properly shut down your system. And by turning off your PC with a normal shutdown procedure, you will be putting less stress on your computer's components, such as the processor and motherboard.

The amount of backup time offered by a UPS can vary, but most models average one to two hours. The exact time depends on what type of devices you have connected to your computer. For



example, if you have a desktop computer with demanding components, such as a high-end graphics card, it will use the UPS' reserve power more quickly than a lower-powered computer would.

Even though some UPSes offer longer backup periods, a UPS is not meant to be used as a generator. You should use the allotted time to save your work and properly shut down your computer.

Why You Need A UPS

- A UPS will keep your computer on and running in the event of a power outage, giving you enough time to shut it down properly.
- They might help prevent component damage or data loss.
- UPSes come in different shapes and sizes to best fit your needs.
- A UPS might include other features, such as an AVR.

UPS Features

UPSes come in different forms, such as upright towers or power strips with multiple outlets that look like surge protectors. Depending on how much room you have in your home office and how many devices you need to plug into the UPS, you may find that one UPS' build is better-suited for your computer's setup.

In addition to providing secondary power to your computer, many UPS models include an AVR (automatic voltage regulator) feature, which normalizes the voltage running to your computer so that it's neither too high nor too low. AVRs also act as a power conditioner and filter out EMI (electromagnetic interference) and RFI (radio frequency interference) to provide clean power to your computer.

If a power outage occurs while you're away from your computer, any UPS will operate without any effort on your part, thanks to auto-shutdown software. In your absence, the UPS will automatically save your PC's data and shut down your system, keeping your files and hardware safe from harm.

By adding a UPS to your computer setup, you will protect your PC investment from the most common power-related problems, such as power spikes or blackouts, all while having enough battery power to shut down your system correctly. **EG**

BY KRIS GLASER

Essential

THINGS TO KNOW

COMPUTER MONITORS

Q Can I use a computer monitor as an HDTV?

A Although most current monitors feature a resolution that's capable of natively displaying 720p or 1080p video, monitors don't feature built-in TV tuners. Your PC will need a TV tuner in order to double as an HDTV.

Q Why is monitor resolution important?

A The higher a monitor's resolution is, the more pixels are used to create an on-screen picture, which translates to better detail. A resolution of 1600 x 900 will be good for working with documents and viewing Web pages. But if you plan on watching 1080p video, such as from your PC's internal BD player, or editing photos and video, consider a monitor with a resolution of 1920 x 1080 or above.

Q Will my new monitor work with both a PC and a Mac?

A Yes. Recent Macs feature similar outputs to PCs, so they can connect to monitors with a DVI or HDMI input.

Q How do I know what type of input the monitor will need?

A The monitor should have an input that's compatible with the output of your PC, such as DVI. If your PC only offers a VGA output, you can use a VGA-to-DVI adapter to connect the two, but the PC will still only send analog-quality video.

Q I frequently play video games on my computer. What should I look for in a monitor?

A Make sure the monitor has a low response time, such as 2ms, which will help reduce the chances that fast-action images will blur across the screen.

Q Is there a quality difference among HDMI, DVI, and VGA inputs?

A Yes, VGA is an analog standard that delivers a lower-quality signal than HDMI or DVI, which both deliver an uncompressed digital video signal. The benefit of using HDMI over DVI is that it can also carry an audio signal, so you only need to run one cable to deliver high-quality sound to a monitor with built-in speakers.

Q I enjoy editing photos and video on my PC. Are there any particular features I should look for in a monitor?

A Look at contrast ratio. A monitor with higher contrast ratio, such as 1000:1, should offer better color accuracy when editing photos than one with a lower contrast ratio, such as 500:1.

Q What does Energy Star qualified mean?

A To be qualified, a monitor must meet certain requirements set by Energy Star, a joint program through the EPA and the Department of Energy. These typically use 25 to 60% less electricity than non-Energy Star monitors.

Q I already have speakers connected to my PC. Will a monitor with built-in speakers offer better sound?

A No; due to their small size and power, it is highly unlikely that a monitor's integrated speakers will sound better than your PC's peripheral speakers.









Q How do I know if the monitor can be mounted to the wall?

A If you want to mount your monitor, it will need to be compliant with VESA's (Video Electronics Standards Association) wall-mountable design.



Which Notebook Computer Is Best For You?









A notebook computer is a pretty big purchase for most people, and it's usually a bit overwhelming, too. This chart compares the features and specs from several different types of notebook models.

		Operating system	Processor	Hard drive size; RAM	Screen size	Dimensions; Weight	Optical drives; Media card reader
	What It Means	The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	The diagonal measurement of the notebook's screen	Height x width x depth; How much the laptop weighs	Drives that can read and write discs; Slots that read media cards without a separate peripheral
	Acer AS5532-5535 MSRP: \$349.99* SKU 9555769	Windows 7 Home Premium	1.6GHz AMD Athlon	160GB; 3GB	15.6 inches	1.5x14.4x10.8 inches; N/A	Double-layer DVD±RW/CD-RW; Yes
	Gateway EC1410U MSRP: \$399.99* SKU 9574757	Windows 7 Home Premium	1.3GHz Intel Celeron	250GB; 2GB	11.6 inches	0.8 to 1.1x11.2x8 inches; 2.9 pounds	No; Yes
	Toshiba Satellite L505-S5990 MSRP: \$639.99* SKU 9549045	Windows 7 Home Premium	2.1GHz Intel Core 2 Duo	320GB; 3GB	16 inches	1.6x15.1x10.2 inches; 6 pounds	Double-layer DVD±RW/CD-RW; Yes
	HP Pavilion dv7-3065dx MSRP: \$729.99* SKU 9556296	Windows 7 Home Premium	2.4GHz AMD Turion II Ultra Dual-Core	500GB; 4GB	17.3 inches	1.37 to 1.7x16.2x10.9 inches; 7.69 pounds	Double-layer DVD±RW/BD/CD-RW; Yes
	Sony Vaio VPC-CW17FX/W MSRP: \$799.99* SKU 9528996	Windows 7 Home Premium	2.2GHz Intel Core 2 Duo	500GB; 4GB	14 inches	1.5x13.4x9.2 inches; 5.3 pounds	Double-layer DVD±RW/BD/CD-RW; Yes
	Apple MacBook MSRP: \$999* SKU 9611541	Mac OS X 10.6 Snow Leopard	2.26GHz Intel Core 2 Duo	250GB; 2GB	13.3 inches	1.08x13x9.12 inches; 4.7 pounds	Double-layer DVD±RW/CD-RW; No
	Asus G60VX-RBBX05 MSRP: \$999.99* SKU 9556072	Windows 7 Home Premium	2.1GHz Intel Core 2 Duo	320GB; 4GB	16 inches	1.6x14.8x10.4 inches; 7.2 pounds	Double-layer DVD±RW/CD-RW; Yes
	Dell Adamo MSRP: \$1,499* SKU 9375035	Windows 7 Home Premium	1.2GHz Intel Core 2 Duo	128GB; 2GB	13.4 inches	0.65x13.09x9.5 inches; 4 pounds	No; No

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Which Netbook Is Best For You?

Netbooks don't offer the full capabilities that notebooks do, but these compact devices are ideal for those who need to stay connected while on the go. To find the netbook that fits your mobility needs, here's a comparison of the latest models.

		Operating system	Processor	Hard drive size; RAM	Graphics card	Memory card reader	Ports
What It Means		The software (usually Windows XP or Linux) that controls your PC	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Controls the quality of the video and images you see on-screen	Slots that can read media cards without a separate peripheral	Sockets that give your computer access to different peripherals
	Asus Eee PC 900HD MSRP: \$249.99* SKU 9447495	Windows XP Home	N/A	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC	3 USB; 1 Ethernet
	Gateway LT2023U MSRP: \$299.99* SKU 9568639	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/MS Pro/xD-Picture Card	3 USB; 1 Ethernet; 1 VGA
	MSI U100-641US MSRP: \$329.99* SKU 9178775	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/MS Pro	3 USB; 1 Ethernet; 1 VGA
	Asus MK90 MSRP: \$349.99* SKU 9441865	Windows XP Home	N/A	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	3 USB; 1 Ethernet; 1 VGA
	HP Mini 1036 NR PC MSRP: \$369.99* SKU 9446138	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC/MS/xD-Picture Card	3 USB; 1 Ethernet; 1 VGA
	Compaq Mini 110c-1040DX MSRP: \$389.99* SKU 9376953	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/xD-Picture Card	3 USB; 1 Ethernet
	Toshiba NB205-N325PK MSRP: \$399.99* SKU 9575603	Windows 7 Starter Edition	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	3 USB; 1 Ethernet
	Sony Vaio VPCW121AX/W MSRP: \$499.99* SKU 9568185	Windows 7 Starter Edition	1.6GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 950	MS Pro	2 USB; 1 Ethernet; 1 VGA

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Which All-In-One PC Is Right For You?

An all-in-one computer is compact, thanks to all its hardware being placed in the monitor. Some models offer a touchscreen interface that lets you access functions by selecting on-screen items with your finger, while others rely on a wireless mouse and keyboard. To see which all-in-one PC fits your needs, check out the chart below.

		Operating system	Processor	Hard drive size; RAM	Display; Optical drive	Ports	Graphics card
	What It Means	The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Display size (measured diagonally); Disc drive included with the system	Sockets the computer has for accessing peripherals	Controls the quality of your video and images
	MSI WindTop AE1900-14SUS MSRP: \$399.99* SKU 9571395	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	18.5 inches; Double-layer DVD±RW/CD-RW	4 USB, 1 Ethernet, media card reader	Intel Graphics Media Accelerator 950
	Sony Vaio VGC-JS450F/S MSRP: \$999.99* SKU 9561592	Windows 7 Home Premium	2.7GHz Intel Pentium	500GB; 4GB	20.1 inches; Double-layer DVD±RW/BD/CD-RW	1 USB, 1 Ethernet, media card reader	Nvidia GeForce 9300M GS
	Apple iMac MSRP: \$1,699* SKU 9611587	Mac OS X v10.6 Snow Leopard	3.06GHz Intel Core 2 Duo	1TB; 4GB	27 inches; Double-layer DVD±RW/CD-RW	4 USB, 1 Ethernet, 1 FireWire, 1 SD	ATI Radeon HD 4670
	Gateway ZX4800-02 MSRP: \$749.99* SKU 9527942	Windows 7 Home Premium	2.1GHz Intel Pentium	750GB; 4GB	20 inches; Double-layer DVD±RW/CD-RW	6 USB, 1 Ethernet, memory card reader	Intel Graphics Media Accelerator X4500HD
	Averatec D1005VH1E-1 MSRP: \$749.99* SKU 9514803	Windows Vista Home Premium	2.5GHz Intel Pentium	320GB; 3GB	22 inches; Double-layer DVD±RW/CD-RW	5 USB, 1 DVI, 1 Ethernet, media card reader	Intel Graphics Media Accelerator X4500HD
	HP TouchSmart 300-1020 MSRP: \$899.99* SKU 9563171	Windows 7 Home Premium (64-bit)	2.7GHz AMD Athlon II	500GB; 4GB	20 inches; Double-layer DVD±RW/CD-RW	5 USB, 1 Ethernet, media card reader	ATI Radeon HD 3200
	Sony Vaio VPC-L111FX/B MSRP: \$1,299.99* SKU 9560995	Windows 7 Home Premium (64-bit)	2.7GHz Intel Pentium	320GB; 4GB	24 inches; Double-layer DVD±RW/BD/CD-RW	5 USB, 1 Ethernet, 1 i.Link, media card reader	Nvidia GeForce G210M
	HP TouchSmart 600-1055 MSRP: \$1,599.99* SKU 9555821	Windows 7 Home Premium (64-bit)	2.13GHz Intel Core 2 Duo	750GB; 4GB	23 inches; Double-layer DVD±RW/BD/CD-RW	6 USB, 1 Ethernet, media card reader	Nvidia GeForce GT230M

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Touchscreens

COMPUTERS

Software Listings

Get More Out Of Your PC

Computers can be used to create greeting cards, play games, balance your checkbook, and more. The thing is, most of these functions aren't available straight out of the box. To fully harness your computer's potential, you'll need to buy software. Here are some options.

Art/Illustration/Graphics



Corel Digital Studio 2010

\$99.99*

www.corel.com

See p. 48

Perfect for organizing your digital media, this software suite includes the 2010 versions of PaintShop Photo Express, VideoStudio Express, DVD Factory, and WinDVD.



Adobe Photoshop Lightroom 2

\$299*

www.adobe.com

This photo management software from Adobe lets you quickly and easily import, process, manage, and showcase your images. Plus, it integrates with Photoshop CS4.



Roxio Creator 2010

\$99.99*

www.roxio.com

Use Roxio Creator 2010 to easily capture, enhance, and save your photos, videos, and audio projects. Plus, easy sharing is available via CD, DVD, your mobile phone, your iPod, or YouTube. It also includes video tutorials for advanced and beginner projects.



Broderbund The Print Shop 23 Deluxe

\$49.99*

www.broderbund.com

No matter the project, you can use The Print Shop 23 Deluxe to easily create banners, business cards, letterhead, calendars, photo greeting cards, invitations, and more.

Audio/Video



Pinnacle Studio Ultimate Collection

\$129.99*

www.pinnaclesys.com

Pinnacle Studio Ultimate Collection comes with a full set of plug-ins and a Chroma-key green screen for advanced effects, editing, and production.



Roxio Toast 10 Titanium For Macs

\$99.99*

www.roxio.com

Use Toast 10 Titanium to burn audio tracks, video clips, and other data to disc. You can also convert files for playback on other devices.



Cakewalk Music Creator 5

\$34.99*

www.cakewalk.com

A user-friendly interface lets you bring your music to life and give it a professional sound. You can record, transcribe, and print your very own music.



Apple Final Cut Express 4

\$199.99*

www.apple.com

A drag-and-drop interface provides seamless movement between editing, trimming, and adding effects to your videos. The software is compatible with popular HD formats, including HDV and AVCHD.

Business Applications



Microsoft Office Home and Student 2007

\$149.95*

www.microsoft.com

See p. 58

The Home and Student version of Microsoft Office 2007 includes Word, PowerPoint, Excel, and OneNote, which meets the basic consumer's needs perfectly.



Adobe Acrobat 9 Standard (Upgrade)

\$99*

www.adobe.com

Upgrade to Adobe Acrobat 9 Standard to easily create, combine, and manage various PDF documents with improved features.



Intuit Quicken Home & Business 2010

\$99.99*

www.quicken.intuit.com

Features of the 2010 version of Quicken Home and Business include automatic bill reminders and a one-page view of your finances. Plus, it shows you where you're spending and where you can save.



TurboTax Business Federal + E-file 2009

\$99.95*

www.turbotax.intuit.com

Corporations, partnerships, and LLCs can complete a federal business income tax return, and a free e-file is included with purchase.

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Games/ Entertainment



2K Games Sid Meier's Civilization IV: The Complete Edition

\$39.99*

www.2kgames.com

Get the complete Civilization IV experience with the DRM-free version of classic Civilization IV plus three expansions.



Her Interactive Nancy Drew Dossier

\$19.99*

www.herinteractive.com

You, as Nancy Drew, go undercover on a movie set to investigate a Hollywood-style mystery. Uncover who is behind suspicious press leaks and production accidents with Nancy's sleuthing skills. Earning points during the game reveals an alternate ending.



Electronic Arts The Sims 3

\$49.95*

www.ea.com

Create your very own Sims. Customize their personalities, appearances, and homes, then send them out into the world to explore the neighborhood and meet new friends.



Lego Indiana Jones 2: The Adventure Continues

\$29.99*

www.lucasarts.com

Explore the locations from all four films and build your own levels and environments. And, all of your favorite characters are depicted in Lego form.

Home Productivity



Nuance Dragon NaturallySpeaking 10 Preferred

\$199.99*

www.nuance.com

Dictate emails, reports, and documents much faster than you can type by letting Dragon NaturallySpeaking do the typing for you. The software has an accuracy rate of up to 99%.



Apple MobileMe

\$99*

www.apple.com

MobileMe, Apple's

Internet service, lets you keep your email, contacts, and calendar up-to-date across your iPhone, iPod touch, Mac, and PC. It also lets you store and share documents online via iDisk, and you can manage everything online through a suite of Web applications at www.me.com.



DeLorme Street Atlas USA 2010 Plus

\$39.95*

www.delorme.com

Street Atlas USA 2010 Plus is updated with new roads and road names, and it's now ready for use on any of your favorite devices, such as GPSes, netbooks, computers, and smartphones.



Susteen Data Pilot Backup & Sync Kit (LG)

\$24.99*

www.datapilot.com

Back up and sync your cell phone memory to your computer with a backup and sync kit. Kits for other phone manufacturers are also available.

Security/ Utilities



Kaspersky Lab Internet Security 2010

\$79.95*

www.kaspersky.com

The newest version of Kaspersky Internet Security 2010 includes protection from the latest viruses, spyware, and malware threats.



Kaspersky Lab Anti-Virus 2010

\$59.95*

www.kaspersky.com

Kaspersky Anti-Virus 2010 includes essential protection against Internet threats, such as viruses, spyware, Trojans, and more, and phishing and identity theft defense, as well.



Webroot AntiVirus With Spy Sweeper 2010

\$49.95*

www.webroot.com

Protect up to three computers from viruses and spyware. Spy Sweeper stops both known and potential threats by blocking suspicious activity and is compatible with Microsoft's Windows 7 operating system.



Trend Micro AntiVirus + AntiSpyware

\$39.95*

www.trendmicro.com

Automatic scans, updates, and outbreak alerts make it easy to safeguard data and files. Protects against viruses, worms, spyware, and Trojan horses, keeping your personal data safe.

Backup/ Recovery



Symantec Norton Ghost 14.0

\$69.99*

www.symantec.com

Back up your entire computer or select specific files for backup to ensure you're able to recover from any unforeseen events, such as a crash or virus attack.



iolo System Mechanic

\$49.95*

www.iolo.com

With System Mechanic, you can find and fix errors and fragmentation on your PC, clean out clutter, and optimize your system for best performance.



Macware MacTuneUp

\$34.99*

macwareinc.com

Apple's software offering cleans your Mac by providing automatic maintenance and boosting Internet speed. You can create a bootable backup with disk clones and also back up individual system folders.



iolo DriveScrubber

\$29.95*






www.iolo.com

When it's time to get rid of your old computer, use DriveScrubber to ensure all your personal data has been deleted. DriveScrubber will wipe your entire drive, including free space, and restore damaged drives.

Microsoft® Office 2007 For Every PC & Every Customer



Microsoft sells different office productivity suites aimed at home and small-business users as well as professionals. The following comparison chart details the applications that the five versions of the Office 2007 suite contain, the lifestyle a particular suite is a good fit for, and the system requirements necessary to run the particular suite.

Product Name SKU	Office Home and Student 2007 8129447 	Office Standard 2007 8182637 	Office Small Business 2007 8182593 	Office Professional 8168939 	Office Ultimate 2007 8182664 
MSRP (New/Upgrade)	\$149.95* (\$99* from Dec. 6 thru Jan. 9 at Best Buy)	\$399.95*/\$239.95*	\$449.95*/\$279.95*	\$499.95*/\$329.95*	\$679.95*/\$539.95*
Best For	Students and general home users	Small businesses, students, and par- ents who want to add Outlook email features	Small-office and home- office business users who want to add Outlook and business- management email tools and the ability to design and publish var- ious materials	Professionals and users in corporate en- vironments who need a complete suite of productivity and database software to manage daily tasks	At-home and business users who need to create, manage, and update data that can be shared with others through the Ultimate's col- laboration tools
Word 2007	✓	✓	✓	✓	✓
Excel 2007	✓	✓	✓	✓	✓
PowerPoint 2007	✓	✓	✓	✓	✓
OneNote 2007	✓				✓
Outlook		✓			
Outlook 2007 With Business Contact Manager			✓	✓	✓
Publisher 2007			✓	✓	✓
Access				✓	✓
Groove 2007					✓
InfoPath 2007					✓
System Requirements (Requirements vary depending on individual pro- gram features)	500MHz or higher CPU; 256MB RAM or more; 1.5GB hard drive space; 1,024 x 768 resolution or higher monitor; Windows XP (SP2) or later OS	500MHz or higher CPU; 256MB RAM or more; 1.5GB hard drive space; 1,024 x 768 resolution or higher monitor; Windows XP (SP2) or later OS	500MHz or higher CPU; 256MB RAM or more; 1.5GB hard drive space; 1,024 x 768 res- olution or higher mon- itor; Windows XP (SP2) or later OS	500MHz or higher CPU; 256MB RAM or more (512MB recom- mended for Instant Search); 1.5GB hard drive space; 1,024 x 768 resolution or higher monitor; Windows XP (SP2) or later OS	500MHz or higher CPU; 256MB RAM or more; 3GB hard drive space; 1,024 x 768 res- olution or higher monitor; Windows XP (SP2), Windows Server 2003 (SP1), or later OS (2GHz or higher CPU and 1GB RAM or more recommended for OneNote Audio Search; 1GHz or higher CPU and 512MB RAM or more recommended for Business Contact Manager; 512MB or higher recom- mended for Outlook Instant Search)
Number Of Installations Included	Three licenses in- cluded for non- commercial use	Volume licensing pricing available for as few as five licenses	Volume licensing pricing available for as few as five licenses	Volume licensing pricing available for as few as five licenses	Various volume licensing programs available

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Computing Glossary

S hopping for a computer can be intimidating, especially with all of the complex terminology. Here, we explain some common computer jargon.

Bluetooth—A short-range wireless standard that wirelessly connects devices such as computers, printers, PDAs, and digital cameras so they can be used together without being connected physically with a cord.

broadband—Network connections that transmit high-speed Internet access. Cable companies offer network speeds of up to 8 to 11Mbps, whereas phone companies offer DSL (Digital Subscriber Line), which supports maximum speeds of 3 to 5Mbps.

CRT (cathode-ray tube)—An old analog display technology for TVs and computer monitors. It features an electron gun illuminating phosphor dots that line the inside of a glass tube. When the phosphors are lit, they display on-screen images. CRTs consume a great deal of power and are heavy and bulky. Many CRTs support digital signals, though these are degraded when converted to analog.

dual-core processor—This integrated circuit, which controls the computer, features two processors, each with its own cache, on a single die or chassis. In

a dual-core configuration, the operating system has two processors to handle instructions, speeding up the computer and its ability to multitask.

Ethernet—A widely used LAN protocol in which computers and networks are physically linked with a cord.

firewall—Hardware or software that limits access by a network or another outside source to your computer; it also may limit your computer's access to the network. These security measures are designed to protect your computer from outsiders who'd like to exploit it in some way. By the same token, firewalls may prevent infected files on your computer from accessing the larger network and spreading the problem to other users.

LAN (local-area network)—A group of computers that are physically connected by wires so they can communicate with one another and share information.

LCD (liquid-crystal display)—Liquid-crystal display technology sandwiches liquid crystals between thin sheets of glass. The crystals twist and untwist to allow and block light from a backlight, forming the images you see. LCDs are thinner, lighter, and consume less power than CRTs. Initially used mostly in notebook PCs, you'll now find LCD

TVs and computer monitors, and they are also in digital cameras, cell phones, portable DVD players, and PDAs.

office suite—Productivity software, such as Microsoft Office, StarOffice, and OpenOffice.org, that often includes word processing, spreadsheet, presentation, database, and financial tools.

operating system—The software, such as Windows XP, Windows Vista, or Mac OS X, that controls a computer and its peripherals and serves as the primary interface for the users.

processor—Also known as a microprocessor or the CPU, this integrated circuit controls the computer.

RAM (random-access memory)—A standard type of memory that's read from and written to by the CPU and hardware.

upgradeable—This term refers to the ability to add or swap out hardware to boost a computer's performance, increase its speed, or replace a defective or obsolete device or component. For instance, you may add more memory, replace an old CRT with a widescreen LCD, or swap out an older graphics card for a newer one that features an ATSC TV tuner so you can watch digital TV on your computer. Look for a computer with expansion slots or empty bays.

NOTEWORTHY

Accessories & Services

A computer is a big investment, and now that you've taken the plunge, it's time to decide what accessories you need to go along with that shiny new purchase. We've rounded up several of our favorite extras for every computer owner. Whether you have a laptop or desktop, be sure to add these items to your shopping list to complete your computing experience. **FG**



KEYBOARD

- An ergonomic design can cut down on the wrist strain associated with carpal tunnel syndrome
- Bluetooth connectivity lends itself to a tidy desk because there's one less wire to contend with
- A specialty model, such as a gaming or media keyboard, adds functionality to your pastime of choice



EXTERNAL HARD DRIVE

- Protect precious video and photo memories with backups
- Keep your computer running more efficiently by saving large files, such as your media collection, on an external drive



USB HUB

- Offers an affordable way to connect all of your peripherals, even if you have more gadgets than USB ports
- Adds the convenience of easy USB access—no more reaching behind your computer to plug in your USB devices



MOUSE

- A wireless mouse will cut down on cable clutter at your desk and also offers the convenience of portability for laptop use
- A gaming mouse can deliver better accuracy and speed for the ultimate in control
- Consider customizable buttons if you want to be able to access media, files, or programs with one-touch access



CLEANING KIT

- Specially designed cleaners will keep your LCD or plasma computer screen clean without running the risk of scratching its surface
- Cloths are often made of low-conductivity material in order to reduce static



SURGE PROTECTOR

- Ensure the electrical current running to your desktop or laptop computer doesn't exceed proper levels
- Portable models will protect your laptop when you're on the go for work or play



WEB CAM

- Bridge the gap between long-distance family and friends with online video chatting by adding a Web cam to your setup



PRINTER

- A quality photo printer will eliminate trips to the drugstore for 4x6 prints and give you the ability to instantly share your photo memories
- An all-in-one model is the perfect addition for any busy family that needs a device that can operate as a copier, scanner, fax, and printer



COMPUTING SERVICES

To keep your desktop or laptop computer in tip-top shape, take advantage of the computing services offered at your local CE retailer. They can help you keep your machine running smoothly and free from the dangers that lurk online.

- Computer Setup & Networking
- Virus & Spyware Removal
- Data Backup & Recovery
- Hardware & Software Upgrades
- Training & Consultation

FLO TV™ Personal Television

No Waiting. No Downloading. No Kidding.

BUY NOW
Get 6-months' subscription service included - almost a \$90 value.*



Too often, live TV is a good news/bad news scenario. The Lakers are on at 7 p.m.? Good. You'll be at the office catching up on paperwork? Bad. What you need is a standalone TV portable enough for watching TV when you're anywhere within a coverage area. What you need is the FLO TV™ Personal Television (www.flotv.com), which provides 24/7 access to sports, breaking news, network and cable shows, kids' programs, and more in a device thin enough to store in a front pocket but robust enough to deliver high-quality digital TV without any lag time.

TV That Goes With You

Using a dedicated national mobile TV network, the FLO TV™ Personal TV can play your favorite shows. FOX News, MSNBC, and CNBC will keep you current, while COMEDY CENTRAL, MTV, Adult Swim Mobile, and 2.FLO channels will keep you culturally hip. ESPN MobileTV, meanwhile, is one channel that has sports action, scores, and post-game breakdowns, while ABC Mobile, CBS Mobile, FOX Mobile, and NBC 2Go offer up entertainment from morning to long past primetime. For the kids, the Disney

Channel means "Hannah Montana" and Nickelodeon's "Dora The Explorer" is just a button push away.

For a limited time, the FLO TV™ Personal TV purchase price includes a prepaid six-month subscription to the FLO TV™ service, saving you nearly \$90. Upon expiration of the six-month period, the then-current monthly rate will be charged, which is now \$14.99. However, lower renewal rates may be available, so check flotv.com.

Go With The FLO

The FLO TV™ Personal TV displays shows on a 3.5-inch touchscreen that has an automatic backlighting feature to adjust to ambient lighting. The touchscreen and an intuitive on-screen programming

guide make surfing stations as easy as swiping a finger across the screen. Integrated stereo speakers, meanwhile, output audio strong enough to fill a room, while a 3.5mm headphone jack allows for more subdued viewing when needed. For extended watching, an adjustable built-in kickstand securely props the player upright, while the integrated Li-Ion battery supports up to five hours of viewing time or up to 300 hours of standby time. Other features include program reminder and parental control options and a complete program schedule at flotv.com/whats-on-flo-tv.

The FLO TV™ Personal TV blends the portable convenience of a mobile device with the satisfaction of 24/7 access to TV in one device the entire family can gladly focus their eyes on. **FG**

All Around Town

FLO TV™ live mobile TV is also available on some mobile phones as AT&T Mobile TV from AT&T and V CAST Mobile TV from Verizon Wireless. Additionally, the FLO TV™ service can be added to new or existing in-vehicle entertainment systems through local car dealers. ●

*Service must be activated between 11/1/2009 and 3/31/2010 to receive 6 month prepaid subscription. Taxes not included. Additional fees and charges may apply. Pricing and service subject to change at any time. After the expiration of the original pre-paid subscription, your subscription will automatically renew and your credit card will be charged the then-current monthly rate, currently \$14.99; lower renewal rates may be available - check flotv.com. Please review the FLO TV Customer Contract and Privacy Statement at flotv.com for additional terms and conditions that apply to this purchase. All subscription payments are non-refundable. All programming subject to change and blackout restrictions. Purchase of compatible device required to view the FLO TV service. Service not available everywhere. Go to <http://www.flotv.com> for coverage. © 2009 FLO TV Incorporated, a Qualcomm company. All rights reserved. FLO and FLO TV are trademarks of Qualcomm Incorporated. All other trademarks are the property of their respective owners. Image on device is generic and does not represent the FLO TV service.

HOW TO BUY

Media Player Content

Where To Get Videos, Tunes & More

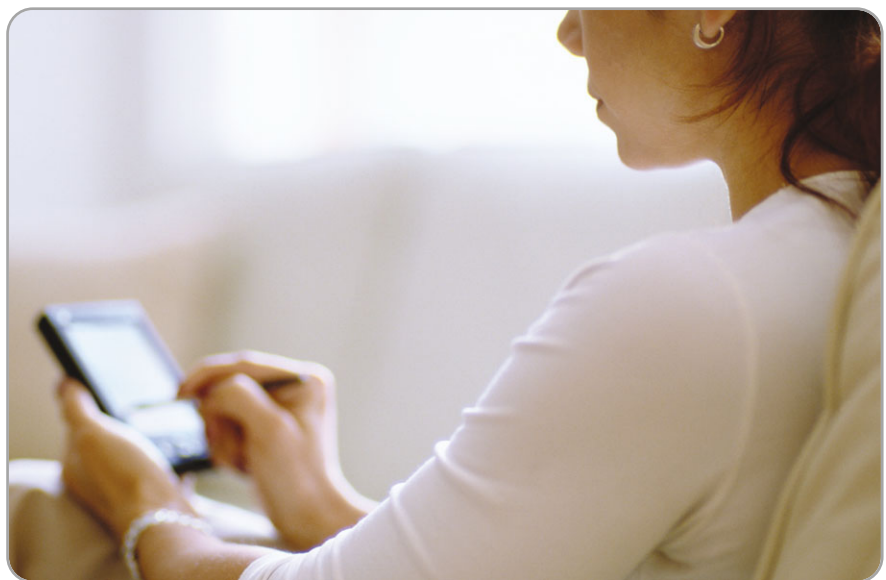
There's more to a portable media player than just the device itself. The plethora of multimedia content options not only provide numerous ways for you to entertain yourself, but you can also keep yourself connected to what's happening around you by uploading the latest viral videos, music singles, and TV episodes.

Whether you're riding the subway to the daily grind, jogging your familiar running route, or enjoying the latest episode of your favorite TV comedy anytime you want, the right multimedia content can make any activity a lot more enjoyable.

Connect The Spots

One of the most recent additions to portable media players is the ability to access streaming content using a wireless connection. With built-in Wi-Fi capabilities, some portable media players can support live multimedia content, such as Internet videos and TV (with a supported mobile Web browser). This type of streaming also applies to streaming satellite radio content, which lets you listen to hundreds of radio stations commercial-free, if you have a subscription.

A wireless connection is also necessary for downloading applications, such as calendars, notes, and other widgets, for your portable media player.



Music Mosaic

Music is available in a variety of formats. MP3 is the most common compressed format, but you should also consider purchasing smaller file formats, such as WAV and WMA. Other standard formats include ATRAC3, AIFF, RA, and OGG. To access songs in these formats on your portable media player, you can use an online store, redeem prepaid music cards, or subscribe to music providers to download or stream on-demand music.

Vibrant Video

Before you get too excited about playing videos on your new portable media player, make sure your device supports a compatible video content so

Staying Content

- Media content must be compatible with your portable media player.
- Much of the video, music, and radio content is available through Wi-Fi streaming.
- You can buy media content from content providers online or via a program you download.

you can access online video libraries or download a music program that links to an online store. For example, if you intend to watch TV shows and feature movies on a regular basis in compressed HD format, look for video formats in H.264/MPEG-4/AVC, DivX, and M4V.

Content Provider

Regardless of the content you choose to purchase for your portable media player, you'll want to make sure that you have enough space on the internal storage or media card (anywhere from 1 to 160GB) to hold each multimedia format. But now that you know what's available, download until your heart's content. **EG**

BY JOANNA SAFFORD

GPS Devices

Which Route Should You Take?



ALL GPS DEVICES SERVE TO GET YOU FROM HERE TO THERE. Not all GPS devices are created equal, however. Generally speaking, models fall into three categories. Here's a breakdown.

Starting Out

Ideal for first-time buyers, entry-level GPS models cover the navigational basics but typically omit extras that can overwhelm inexperienced users. Features may include:

3.5-inch touchscreen displays

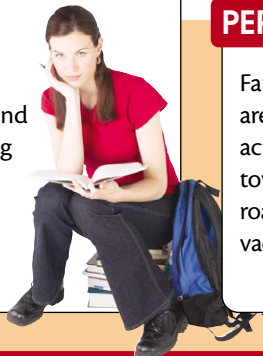
Basic 2D/3D nationwide and North American maps

Integrated POIs (points of interest), such as gas stations, ATMs, hotels, shops, etc.

Spoken text-to-speech directions ("Turn left on Main Street in 400 feet"); for example, TomTom's One 140-S (\$199; www.tomtom.com) speaks names of streets and places as you approach them

PERFECT FOR:

A college student who's new to town and needs help navigating streets on campus, to a job downtown, and back home for Christmas break.



The Middle Ground

Midrange GPS devices cover the basics and tack on extras more experienced users will benefit from. Features may include:

4.3-inch touchscreen displays

Enhanced support for waypoints or saved places

Lane assistance features to help get you in the right lane; TomTom's Advanced Lane Guidance feature, for example, demystifies complicated street exits and junctions

Rerouting features to quickly recalculate a route if you should miss a turn; TomTom's XL 340-S (\$249) includes IQ Routes, which calculates the fastest route possible based on the time of day

PERFECT FOR:

Families that are busy with activities around town and go on road trips for vacation.



The High Road

The smorgasbord of extra goodies that pro-level GPS devices include keep drivers connected, entertained, and informed. Features may include:

4.3-inch or larger touchscreen displays

Integrated Bluetooth; ideal for sending/receiving hands-free calls in states with laws against mobile phone use when driving

Real-time traffic and weather updates; take for instance TomTom's Live Services, which provides five-day weather forecasts, best local gas prices, and Google Local Search access to acquire timely local information

Voice recognition support; the TomTom Go 740 LIVE (\$349.95) supports 130-plus commands to execute functions

Some models offer CD/DVD, MP3 audio, audio book, car stereo, and satellite and HD radio support

PERFECT FOR:

A tech-savvy businessman who frequently travels across the country for client meetings, conferences, and presentations.



What Can An MP3 Player Store?

Find An MP3 Player Compatible With Your Needs

The biggest mistake you can make when buying an MP3 player is to get one that isn't compatible with the Web sites from which you want to download music files. It's also important to find out which other file formats—such as JPEG photo and H.264 video files—the player can support and where you can find them or how you can create them.

We'll help your shopping process by giving you an overview of the file types MP3 players support and explaining why players have such a range of storage capacities for different file types.

Compatible Sources

Once you determine which file formats the player supports, you need to identify the sources that can provide content in those formats. We'll focus on music sites because music is the primary reason people use MP3 players.

The following file types are either available from the service or ones you can use with the service's application in creating playlists and burning CDs.

- **iTunes.** The music you buy at iTunes is in the AAC or M4V formats. You may use the iTunes jukebox to convert WAV files found on CDs.
- **Rhapsody (www.rhapsody.com).** This site supports MP3, WMA, AAC, RA, and RAX formats.
- **Napster (www.napster.com).** Most tracks from Napster are in the WMA format.
- **Vorbis (www.vorbis.com).** If your player can play OGG files, then visit Vorbis to get a list of other sites

that let you download free OGG music files.

Actual Capacity

You will have access to most, but not all, of the storage capacity of an MP3 player because a portion of it is needed for formatting and other data management functions.

Check out *First Glimpse's* MP3 Player Comparison Chart on page 70 to see how much you can store on a variety of available players.

Manufacturers base the number of files you can store on standards that depend on the file type. For example, some manufacturers estimate the number of songs you can store on their players based on 128Kbps in each WMA file. But MP3 files are larger than WMA files, so count on a lower number of songs if you load a player with MP3 files instead of (or in addition to) WMA files.

If the player can store photos and/or videos, the storage capacities will vary for each. The average size of a four-minute music file may be more than 3MB, but one JPEG file may be a fraction of that size—1MB or less. JPEG sizes also depend on the resolution and compression of the camera that captured the image.

Video file sizes range widely, again because of varying standards. Some manufacturers determine the video capacity of MP3 players in terms of *total hours* of videos they store as opposed to the *number* of video files.

Informed Expectations

The key to contentment with your MP3 player begins with realistic, informed expectations of what and how much it can store. Find out which file formats the device works with and then make sure those formats are compatible with the Web sites and devices you use the most. **FG**

BY RACHEL DEROWITSCH

Audio Files

One common question shoppers have is whether an MP3 player can play the songs they have on CDs. Most portable music players can, as long as they work with a media application, such as Apple iTunes (www.apple.com) or Windows Media Player (www.microsoft.com), that converts WAV files, a standard audio file commonly found on PCs and CDs. The media application compresses big WAVs into much smaller files, such as an MP3 or WMA.

An MP3 file is about 3MB, which is about one-tenth the size of a WAV file. WMA (Windows Media Audio) files are even smaller—about half the size of an MP3.

AAC is the primary format used by Apple products, including the iPod and iPhone. It's also the format of the files you buy from iTunes.

Other common audio file formats that are used include the following.

- ATRAC3 files are compatible with Sony MP3 players. (Sony MP3 players, however, are also able to play other file formats.)
- AIFF is the standard audio format for Mac computers.
- RA is the RealNetworks' audio format, and RAX is the Secure RealAudio format.
- OGG is an open-source codec, which means there is no licensing fee for downloading these files.

Photo Files

Digital cameras, the likely source of the photos you'll transfer to an MP3 player, save images in JPEG format. You'll want to make sure that the player you buy supports JPEG files if you want the player to be able to display photos.

Other image file formats include BMP, GIF, TIFF, and PNG, which are commonly found in photo-editing and graphics applications.

Video Files

MP3 players that feature video playback work with one or more of the following video file formats:

- WMV is a compressed video format developed by Microsoft.
- H.264/MPEG-4/AVC is a standard for highly compressed video used for storing HD files.
- DivX, a video compression format created by DivX, supports HD videos. It's also supported by Windows Media Player.
- M4V is a file type based on MPEG-4 available from the Apple iTunes Store in the form of music videos, TV shows, and feature movies.



On The Spot

Record Audio & Video With An MP3 Player

The great thing about today's MP3 players is that they do far more than just play digital music. Their extended reach includes some models having the ability to record user-generated audio and video via an internal or external microphone and integrated video recorder. The following details such capabilities and addresses the benefits of having these devices.

Take Note Of This

Arguably, the most underutilized feature in MP3 players is the voice recorder. This can be useful in situations such as reminding yourself to DVR "Fringe" when you get home or letting you record a college professor's lecture on, say, third-world country economics that you can repeatedly listen to or share with classmates.

MP3 players with this feature typically use an inconspicuous internal microphone to record files that are usually saved in the WAV format in mono quality, which is serviceable for most purposes but not on par with stereo quality. Some models, however, require

an external mic, which some earbuds might include.

As far as quality goes, some players feature multiple quality settings (Low, High, etc.) and possibly offer stereo audio recording. Sharing recordings, meanwhile, is usually as easy as transferring the file to a computer using media manager software and attaching it to an email or posting it to a Web site.

Perhaps the best news concerning voice recorders is that you'll find them in MP3 players at the low end of the price scale to the top. Thus, whether you want to record a guitar lick while it's fresh in your mind or make a grocery list while

driving the kids to school, you can do it with a model costing anywhere from \$39.99 to \$379.99.

Venture Into Video

Although the number of MP3 players with voice recorders far outpaces those with video recorders, being able to capture video clips at a respectable quality from the same device you listen to music with is as tantalizing an MP3 player feature as there currently is. You can also expect to see more MP3 players that offer this capability in the foreseeable future.

Currently, MP3 player models that are capable of capturing video do so at up to 30fps at a 640 x 480 resolution in landscape and portrait modes. Videos are encoded, or saved, in the H.264 format complete with AAC audio, meaning you can play the video clips on other devices, such as notebooks, PCs, and smartphones, that support the formats. Additionally, upon capturing a video clip, you can apply one of 15 effects (film grain, motion blur, mirror, among others) and immediately share the clip via email or online. **FG**

BY BLAINE FLAMIG

Press Record

Some benefits of using an MP3 player that can record voice memos or video include:

- Sharing video clips with friends and family via email or a Web site.
- Recording reminders, to-do lists, lectures, speeches, and more.
- Combining MP3-playing and video-recording functions in one device.

Video On The Go

Watch Whenever & Wherever

If you're looking for a convenient way to watch movies and TV shows on the move, you have plenty of options, including portable media and DVD players, handheld gaming consoles, and mobile Internet devices. In this article, we'll identify the benefits of each type of portable video player to help you decide which is the best fit.

Portable Media Players

Portable media players are great for people with large collections of digital music and video. Most new models include a display that lets you watch video downloads, such as podcasts, and view photos as well as listen to music. Some media players even let you play games that are designed for use with the device's controls. Another plus is that most fit in a pocket, so they are perfect for those who want a device portable enough to carry anywhere. The primary downside to watching video on digital media players is the small screen size; for example, most models offer a 2- or 3-inch display that might not be comfortable when watching video for hours at a time.

Portable DVD Players

If you prefer a more cinematic experience when watching movies and TV shows on disc, consider portable DVD players, which generally have screens between 7 and 10 inches in size. Portable

DVD players are ideal for travelers whose movie library is already stored on DVDs, because you'll already have a variety of content for viewing on the road. Most models feature a battery life of around six hours, which is great for long trips. If you want to keep external noise to a minimum and share the audio between two people, purchase a portable DVD player with dual-headphone jacks.

Handheld Gaming Console

Not all handheld gaming devices can play video, so it's a feature you'll need to look for when shopping for one. In some cases, you'll need to purchase special media that's designed for playback on the device. Besides video playback and gaming, some handheld consoles feature Wi-Fi capabilities to let you browse the Web, check your email, or instant message friends. Still, the primary purpose of the console is gaming, so this one is best for video enthusiasts who also enjoy playing games.

Mobile Internet Devices

Although not exactly pocketable, devices such as netbooks offer the sharpness of a large display for video playback as well as Wi-Fi connectivity and other computer functionality. Internet-connected netbooks also have enough power to stream online audio and video, and the larger screen size is handy when reading and navigating Web pages. Plus, with outputs compatible



with your HDTV or home-theater system, you can watch video from the device on your HDTV. **FG**

BY NATHAN LAKE

A Portable Video Replay

- Portable digital media players come in sizes ideal for travel, so you can enjoy your digital media collection anywhere.
- Portable DVD players typically offer a larger screen size and good battery life.
- Handheld gaming consoles are ideal for those who want to have the ability to play games and watch movies on a compact device.
- Netbooks work well for portable video playback and also provide computer functionality.

FirstGlimpse

Essential

THINGS TO KNOW

CAR SPEAKERS

Q How can I determine if a speaker will fit in my vehicle?

A You can check your car's owner's manual or call the manufacturer to find out what type and size of speakers will work with or replace the factory-installed components in your vehicle.

Q What is a driver?

A A speaker element that produces a given range of sound frequencies. A collection of drivers works together to deliver the full range of sound.

Q What is a tweeter?

A A type of driver designed to produce high-pitched sounds that other driver types couldn't accurately play back, such as woodwind instruments, cymbals, and snare drums.

Q What is a woofer?

A The type of driver responsible for delivering low-frequency sounds, such as a bass guitar, tenor vocals, or bass saxophone.

Q What types of sound come from a mid-range driver?

A Vocals, spoken words, and most musical instruments (not high-pitched ones) fit into scope of mid-range drivers.

Q What's a 3-way speaker?

A This features a tweeter, woofer, and mid-range driver, and often offers more balanced sound reproduction than a 2-way speaker, which features a tweeter and a woofer.

Q What does a 4-way car speaker consist of?

A It features tweeter, super tweeter (which offers greater range for high-pitched sounds), mid-range, and woofer drivers.

Q What's the difference between RMS and peak power?

A Both measured in watts, peak power is the highest amount of power the speaker can support. RMS is the level of continual power it can handle.

Q Does the type of cone material make a difference in regard to sound?

A Not really. While tweeters, woofers, and mid-range drivers are made of a variety of materials, such as paper and ceramic, it's a matter of personal preference. You'll need to listen to the speakers to see if you prefer one over the other.

Q Is the type of material surrounding the cone important?

A Yes, a durable material, such as rubber or a rubber-coated cloth, will last longer than a foam-based surround, as the foam can rot away and deteriorate the sound quality of your speakers.



MP3 Player Glossary

W

ho doesn't want an MP3 player? It can help you relax, provide motivation, and keep you up-to-date on news. When you head to your local CE retailer to snag one, make sure you have this glossary so you can choose the perfect model.

AAC (Advanced Audio Codec)—An audio compression technology and the format used by iTunes.

Bluetooth—A short-range wireless standard that lets you connect your MP3 player to other devices, such as headphones, speakers, or your computer, without using a cord.

Click Wheel—Apple's proprietary circular control on the front of the iPod.

download—In terms of digital music, downloading is when you retrieve a song from an Internet site or another network connection and save it to your computer or digital music player. You'll download songs from music service Web sites such as iTunes, Napster, or Rhapsody.

DRM (Digital Rights Management)—A security mechanism for digital media. A common DRM scheme for digital music involves getting a license file to authorize playback of a free or purchased song.

earbuds—Small circular devices you put into your ears that serve the same function as headphones. Music players come with their own earbuds, but you can, of course, purchase a separate pair that is more comfortable or of better quality.

flash memory—Solid-state memory with no moving parts that is lightweight and small. In terms of digital music players, a flash-based player is lighter

and smaller than a hard drive-based player, and it also won't skip. Thus, flash-based players are popular for use during exercise. However, the capacity of a flash drive isn't as large as a hard drive-based player.

FM tuner—If built into your music player, an FM tuner lets you listen to local radio broadcasts.

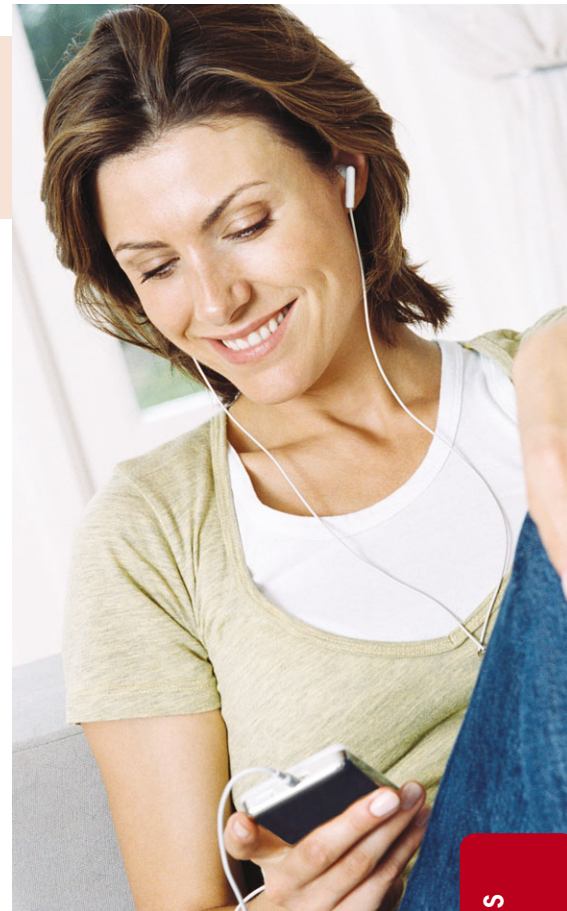
hard drive—Storage that uses rigid platters inside a fixed casing. In terms of digital music players, a hard drive-based player is larger and heavier than a flash-based player. Because of the moving parts (the platters), hard drive-based players are prone to skipping, but capacities are larger than flash drive capacities.

iTunes—An application that loads onto your computer and lets you play, organize, and download and purchase music, videos, podcasts, and television shows for a portable media player or computer.

MP3—Perhaps the most popular digital audio encoding format. It compresses audio to about one-twelfth the original size while still providing excellent sound.

playlist—A queue of songs a user creates to play on a computer, burn to a CD, or transfer to an MP3 player. The playlist includes only directions to the location of the songs, not the actual songs.

podcast—A downloadable episode that is similar to a radio program. A



user can subscribe to a podcast for updated episodes, or she can download podcasts one at a time. A podcast is usually available in MP3 format.

screen—The display on the front of a portable music player. A player's screen can either display in color or black and white.

WMA—Windows Media Audio is a digital audio format created by Microsoft to compete with the MP3 format. WMA files are smaller than MP3 files.

widescreen—A screen that has an aspect ratio of 16:9.

Which MP3 Player Is Best For You?

Pods are cool, sure, but you have other choices when it comes to listening to your tunes. This chart compares the most important—and coolest—features from select MP3 players.

		Memory type	Capacities	Songs	Video; FM tuner capabilities	Colors	Battery life
What It Means		Hard drive (moving parts, more capacity) or flash (no moving parts)	How much memory the player has	Based on four-minute songs at 128Kbps, the number a player can hold	Some MP3 players can play video or let you listen to radio stations	Several players offer a variety of color choices	How long the battery will last when playing music
	SanDisk Sansa Clip+ MSRP: \$39.99*; \$49.99* SKU 9448564	Flash	2GB; 4GB	500; 1,000	No; Yes	Black, red, blue	15 hours
	Apple iPod shuffle MSRP: \$59*; \$79* SKU 9229765	Flash	2GB; 4GB	500; 1,000 (AAC)	Neither	Black, silver, pink, green, blue	10 hours
	SanDisk Sansa Fuze MSRP: \$69.99*; \$79.99*; \$99.99* SKU 8753789	Flash	2GB; 4GB; 8GB	500; 1,000; 2,000	Both	Black, blue, red, silver	24 hours
	Sony E Series Walkman MSRP: \$79.99* SKU 9443792	Flash	8GB	N/A	Both	Black	30 hours
	Sony S Series Walkman MSRP: \$109.95*; \$129.95* SKU 9443845	Flash	8GB; 16GB	N/A	Both	Black, pink, violet, red	42 hours
	Apple iPod nano MSRP: \$149*; \$179* SKU 9416376	Flash	8GB; 16GB	2,000; 4,000 (AAC)	Both	Pink, orange, green, blue, purple, black, silver	24 hours
	Apple iPod touch MSRP: \$199*; \$299*; \$399* SKU 8771732	Flash	8GB; 32GB; 64GB	1,750; 7,000; 14,000 (AAC)	Yes; No	Black	30 hours
	Microsoft Zune MSRP: \$219.99*; \$289.99* SKU 9449581	Flash	16GB; 32GB	4,000; 8,000	Both	Black, silver	33 hours

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which GPS Device Is Right For You?

One of the hottest CE devices around right now is a GPS, and what a useful device it is, too. Here, we compare some models available on today's market. All of these units come with maps already loaded, and you can purchase additional maps, as well.

		Screen size; Dimensions	Text-to- speech; Traffic receiver	Preloaded maps	WAAS	Bluetooth; MP3 play- back	Included charging adapters
What It Means		The diagonal measurement of the screen; height x width x depth	Unit calls out specific street names; unit receives traffic updates and re-routes accordingly	The regional maps that come included with the GPS unit	A satellite and ground station system that gives exceptional GPS accuracy	Some units communicate wirelessly with other Bluetooth devices or play MP3s	AC adapters plug into the wall; DC adapters plug into your car's cigarette lighter
	Insignia NS-NAV01 MSRP: \$99.99* SKU 9351603	4.3 inches; 3.1x4.7x0.6 inches	Yes; No	Entire U.S.	Yes	No; No	DC adapter
	Nextar 43LT MSRP: \$139.99* SKU 9301052	4.3 inches; 3x4.6x0.8 inches	Yes; Yes	Entire U.S.	No	No; Yes	DC adapter
	Magellan SE4 MSRP: \$179.99* SKU 9556303	4.3 inches; 3.2x4.8x0.7 inches	Yes; Yes (with optional Traffic Link receiver)	Entire U.S. (including Puerto Rico)	Yes	No; No	DC adapter
	Garmin nüvi 205W MSRP: \$189.99* SKU 9470556	4.3 inches; 2.9x4.8x0.8 inches	No; No	Entire U.S. (including Puerto Rico) and Canada	Yes	No; No	DC adapter
	Magellan RoadMate 1445T MSRP: \$199.99* SKU 9536424	4.3 inches; 3.3x4.6x0.6 inches	Yes; Yes	Entire U.S. (including Puerto Rico) and Canada	Yes	No; No	DC adapter
	Insignia NS-CNV43 MSRP: \$199.99* SKU 9366116	4.3 inches; 3.2x4.8x0.7 inches	Yes; Yes	Entire U.S.	Yes	Yes; No	DC adapter
	TomTom XXL 540-S MSRP: \$299.95* SKU 9555037	5 inches; 3.2x5.2x1 inches	Yes; Yes (with optional traffic receiver)	Entire U.S. (including Puerto Rico) and Canada	No	No; No	DC adapter
	Garmin nüvi 1690 MSRP: \$499.99* SKU 9539298	4.3 inches; 3.1x4.9x0.8 inches	Yes; Yes	Entire U.S. (including Puerto Rico) and Canada	Yes	Yes; No	DC adapter

*Prices listed in this issue are for general reference and may vary from retailer pricing.

NOTEWORTHY

Accessories & Services

No matter where you go, a wireless device can add enjoyment to your journey. To make sure you are taking full advantage of the capabilities your wireless devices offer, check your local CE retailer for accessories that can enhance your mobile experiences. We've listed our favorites below. **FG**



GPS CHARGERS

- Make sure your travel companion always has a full battery
- If you do run out of battery, charge your GPS with an adapter; these can plug into a wall, PC, or car's DC outlet



MP3 PLAYER EARPHONES

- Match earphones to your needs: If you don't want anything bulky, opt for earbuds that fit inside your ear; to hear every musical detail, try headphones that cover the ear completely
- Listen to your music without the interference of background noise with earphones that offer a noise-canceling feature



MP3 PLAYER CASES

- Protect your MP3 player from bumps and scratches
- Quickly access your player's functions with a clip
- Keep your player out of your way with an armband



CELL PHONE CHARGERS & BATTERIES

- Keep your phone charged no matter where you are; adapters for your cell phone let you use solar power, your car's DC outlet, wall power, or your computer to charge your phone
- Be prepared for emergencies with extra cell phone batteries



GPS MOUNTS

- Mounts can be placed on a car dash or stuck to a windshield to be within reach



MP3 PLAYER DOCKS & SPEAKERS

- Portable speakers let you play music for a group; some include radios and can also play CDs
- Recharge your player's battery with a portable dock as you continue listening to music
- Play your music through car speakers using an FM transmitter



CELL PHONE HEADSETS

- Keep your hands free while still being able to use your phone
- Link compatible cell phones to a Bluetooth headset to make or take calls without a tangled mess of cable
- Don't miss any of your conversation by using a headset that offers noise-canceling capabilities



CELL PHONE CASES

- Safeguard your phone from wear and tear with a case
- Universal cases fit most sizes of cell phones; some of these will include clips and wrist straps for portability and accessibility
- Fitted cases specifically fit your phone's model type; these can be hard acrylic casings, rubber sleeves, or leather pouches
- Avoid getting scratches and fingerprints on your phone's screen with stick-on or hard, clear screen protectors



MOBILE SERVICES

- Whether your wireless device is brand-new or nearing the end of its life span, your local CE retailer offers services to help you take care of all of your wireless device's needs.
- Protection plans for GPSes, MP3 players, and cell phones
 - Phone and battery recycling
 - GPS setup and deck installation
 - MP3 vehicle integration
 - MP3 player setup and training
 - Cell phone repair services and loaner phones

Livescribe Pulse Smartpen

Never Miss A Word

Livescribe's Pulse Smartpen
2GB and 4GB models, \$149.95 and \$199.95, respectively
www.livescribe.com



In school and business, your ability to remember what was covered in lectures and meetings can mean the difference between a failing and passing grade or a lay-off and a promotion. Livescribe's Pulse smartpen (2GB and 4GB models, \$149.95 and \$199.95, hold 200 and 400 hours of audio respectively; www.livescribe.com), which can be found in Best Buy's Gadgets & eReaders section, has a better way to help you keep track of everything you need to remember.

Taking Notes In the 21st Century

The Pulse smartpen looks and works like a traditional ink pen, but it can also record everything you write or draw using an infrared camera built into the tip of the pen. Using specially designed Dot Paper, which features Pulse smartpen controls and millions of barely perceptible dots, the pen can track your writing. Although Livescribe sells Dot Paper notebooks and journals, you can print out your own Dot Paper for free as long as you have a color printer with a resolution of 600 dpi or better.

Livescribe Pulse Smartpen

- Records everything you write, draw, say, and hear.
- Plays back your meetings or lectures by tapping on your notes.
- Upload your notes and recordings to your PC and the Web.
- Download and install apps onto your Pulse smartpen.

When you touch the tip of the Pulse smartpen to the record icon on a sheet of Dot Paper, a built-in microphone begins recording audio, such as a professor's lecture, your boss' presentation, or your own speaking. The recorded audio is then synced to what you write on the dot paper, so when you review your notes later, you can jump forward or backward in the recording by touching various points in your notes. And speaking of audio, there's a built-in speaker and a headphone jack at the top of the Pulse smartpen that you can use to listen to your recordings.

With A Mind Of Its Own

To navigate and access the Pulse smartpen's many advanced functions, Livescribe includes a high-contrast OLED display.

You can also connect your Pulse Smartpen to your computer. The USB charging cradle and Livescribe Desktop software let you back up notes and audio recordings to your PC or Mac, sort and review them, and quickly search for words in your notes. You can also access Livescribe's social media portal, which lets you create a My Livescribe account for storing and sharing up to 500MB of your notes and audio feeds, as well as share your pencasts on Facebook or embed them on a blog.

Download Applications

With more than 30 applications available, you can download many free and paid apps from Livescribe.com to use with your pen. Options include The American Heritage Spanish Dictionary, Video Poker, Hangman Deluxe Edition, and more. **FC**

HOW TO BUY AN _____ eReader

Keep A Library On The Go



Whether you're sitting at home on the couch, riding the train on your daily commute, or waiting on a flight at the airport, reading is a great way to pass the time.

With an eReader, which is a portable electronic reading device, you can store hundreds of books, magazines, newspapers, and more for your reading pleasure. These devices offer much more than your typical book, such as the option to select multiple font sizes and expandable memory (using a memory card). Some even feature a built-in dictionary. Additionally, eReaders are lightweight and portable, letting you easily slip them into your purse, backpack, or carry-on bag to enjoy reading anywhere you go.

Sizing Up eReaders

When looking for an eReader, consider your portability needs and the type of reading material you plan to consume to determine which screen size you need. eReaders that have screens that are approximately 5 inches (diagonally) are great for travelers or students who need to fit their eReaders in an already jam-packed bag. Someone who reads newspapers or content with graphics, such as charts and graphs, should look for a device that sports at least a 7-inch screen. If you find yourself traveling

often but need to view a lot of content on one page, eReaders with a 6-inch screen are a good compromise.

All About Screens

Some eReaders provide navigational buttons that let you control your device, but others are operated with a touchscreen. Touchscreen eReaders let you turn pages with a finger swipe, and they include a stylus that can be used to highlight text or insert handwritten notes for later review. An eReader with a touchscreen is beneficial for businesspeople who often need to review reports or prepare for presentations.

No Strings Attached

To download reading material, some eReaders connect to a computer using a USB cord, but other models can retrieve content wirelessly with a 3G data connection,

which connects to the Web using cell phone towers. eReaders that have a wireless Web connection let you receive automatic delivery of magazine and newspaper subscriptions or download a new book title after you've finished up your last book. Unless you have frequent access to your computer to download new eReader material, a wirelessly connected eReader is best for anyone who wants the convenience of getting new titles from the Web without being tethered.

Finding The Right Format

An eReader supports many different file types, and this allows you to obtain ebooks (electronic books) from more than one online bookstore. Some eReaders also support files that are checked out by public libraries, so you can borrow ebooks for a limited amount of time rather than purchasing them. Additionally, some eReaders are compatible with media files, including photos and audio (for audio books), along with PDF files and Microsoft Word files. To see if a model supports a particular type of file, be sure to check the eReader's specifications.

eReaders are a perfect fit for many different lifestyles; whether you're a bookworm, student, or traveler, this single device can meet all your reading needs anytime, anywhere. **FG**

BY TESSA WARNER BRENEMAN

eReader Options

- eReaders have different screen sizes to match different lifestyle needs.
- Touchscreen models are great for highlighting text and writing notes.
- eReaders offer both wired and wireless connections.
- The more file formats your device supports, the more material you can enjoy on your device.

Portable Gaming Devices

Do More Than Just Play Games

W

hen you're stuck in the car on a long road trip, at the airport with an overdue flight, or at the mall while your sister

tries on clothes, a portable gaming device can help keep you entertained with more than just games. You'll find portable consoles with special features, such as head-to-head gaming with other players and the ability to make phone calls. To narrow down the search to find the right portable gaming console, here are some highlights of what these devices offer.

Features Galore

A touchscreen is just one of many features that can be found on select handheld gaming devices. Touchscreens are ultra-interactive surfaces that enable you to touch, tap, and draw on the screen for menu selections and gameplay using a stylus or your finger. The touchscreen



doesn't stop there; some games allow you to move characters or draw pictures in order to advance in the game.

Wi-Fi capabilities are also now offered on most portable consoles and can help enhance your gaming experience. With Wi-Fi, you may be able to connect with other portable console players for game competition or interact during gameplay with someone on the other side of the world. Often, that same Wi-Fi capability will enable you to browse the Internet or talk to your friends via an Internet phone service.

An available memory card slot increases your portable game console's existing storage. With this feature, you can save valuable information from your gaming adventures and view photos and video. A memory card slot also gives you the opportunity to use your photos as wallpaper, view a slideshow, or send videos to

friends and family via the console's Wi-Fi connection.

To add a new dynamic to the way you play games, look for a built-in microphone. Certain games may have you blow into the mic to open a secret passageway or say a word to complete a task.

For movie buffs, you can purchase special media called UMDs for the Sony PlayStation Portable (\$169.99; www.sony.com) to watch flicks even when you can't connect to the Internet.

Entertainment To Go

A portable gaming device offers plenty to keep you busy, whether you want to play an interactive game, watch your favorite show, or share your photo collection. **FG**

BY KRIS BRAMBILA

Smartphone Gaming

If you want to take your portable gaming to a new level, look to your smartphone, which probably includes a few games already that can be found by browsing your phone's program menu. But when it's time for a new challenge, you can purchase a special memory card that's preloaded with your favorite games, such as sudoku or chess. Smartphone game cards cost between \$20 and \$40 but also offer additional storage space for photos or music. ●

ESRB Game Ratings & Descriptions

Find Material That's Appropriate For Your Kids

ESRB (Entertainment Software Rating Board) Ratings

In order for parents to select gaming software appropriate for their children, ESRB (www.esrb.org) ratings are listed on the front and back of most game packages to provide concise and impartial details about a title's content.



Early Childhood.

Titles with this rating have content that may be suitable for children ages 3 and older. These software titles contain no material that parents would find inappropriate.



Everyone. Titles with this rating have content that may be suitable for children

ages 6 and older. Games in this category may contain minimal cartoon, fantasy, or mild violence and infrequent use of mild language.



Everyone 10+.

Titles with this rating have content that may be suitable for children ages 10 and older. Games in this category may contain more cartoon, fantasy, or mild violence and language as well as minimal suggestive themes.



Teen. Titles with this rating have content that may be suitable for children ages

13 and older. Titles in this category may contain violence, suggestive themes, crude humor, minimal blood, simulated gambling, or infrequent use of strong language.



Mature. Titles with this rating have content that may be suitable for persons

ages 17 and older. Games in this category may contain intense violence, blood and gore, sexual content, or strong language.



Adults Only.

Titles with this rating have content that is only suitable for persons 18 years and older. Games in this category may include prolonged scenes of intense violence, graphic sexual content, or nudity.

For additional information, ESRB ratings on the back of game packages include content descriptions and depictions.



Gaming Tips For Parents

Aside from checking a game's ESRB ratings, there are other ways you can ensure the games your youngsters are playing are age-appropriate.

- Carefully look at everything on a title's packaging, including the game graphics.
- Find game reviews, screen shots, or demos to get a better idea of a game's content.
- If available, use the game's parental controls to restrict inappropriate content.
- Learn about games by talking to other parents and older children who are familiar with or have played certain titles.
- Participate in your children's gaming and discuss their games as much as possible.
- Be aware of nonrated ESRB material a game may contain. "Mods" are program downloads that can alter a game's content, and online games often have live player chats as well as other user-generated content.

Cloudy With A
Chance Of Meatballs

Rating: PG • Format: Blu-ray Disc



Surrogates

Rating: PG-13 • Format: Blu-ray Disc



Fame

Rating: R • Format: Blu-ray Disc



This Month's Blu-ray Disc Releases

■ January 5 to 11

"8 Mile" • \$22.98* • SKU: 18318916
 "10 Things I Hate About You" • \$29.99* • SKU: 9636037
 "Battlestar Galactica: Season 1" • \$69.99* • SKU: 9657767
 "Chuck: The Complete Second Season" • \$69.98* • SKU: 9641296
 "Cloudy With A Chance Of Meatballs" • \$29.99* • SKU: 9685957
 "The Final Destination" • \$35.99* • SKU: 9641578
 "The Green Berets" • \$24.99* • SKU: 9641384
 "The Last Starfighter" • \$22.98* • SKU: 18318807
 "The Ministers" • \$29.98* • SKU: 18301889

■ January 12 to 18

"Halloween II" • \$29.99* • SKU: 9686037
 "Last Action Hero" • \$19.99* • SKU: 9686107
 "Moon" • \$29.99* • SKU: 9686116
 "Post Grad" • \$29.99* • SKU: 9695153
 "Simpsons: Season 20" • \$59.99* • SKU: 9633428

■ January 19 to 25

"Fool's Gold" • \$19.98* • SKU: 18290755
 "He's Just Not That Into You" • \$19.98* • SKU: 18290819
 "Invention Of Lying" • \$35.99* • SKU: 9641523
 "License To Wed" • \$19.98* • SKU: 18290864

"Nights In Rodanthe" • \$19.98* • SKU: 18290664
 "No Reservations" • \$19.98* • SKU: 18290424
 "P.S. I Love You" • \$19.98* • SKU: 18290549
 "The Bourne Identity" • \$29.98* • SKU: 18330105
 "The Bourne Supremacy" • \$29.98* • SKU: 18330123
 "The Bourne Ultimatum" • \$29.98* • SKU: 18330141
 "The Lake House" • \$19.98* • SKU: 18291327
 "The Wedding Singer" • \$19.98* • SKU: 18291432
 "The Women" • \$19.98* • SKU: 18291502
 "Weeds: Season 5" • \$35.99* • SKU: 9641462

■ January 26 to February 2

"Atonement" • \$26.98* • SKU: 9657776
 "Fame" • \$24.99* • SKU: 9677549
 "Fuel" • \$29.95* • SKU: 18239656
 "Michael Jackson's This Is It" • \$39.95* • SKU: 9673155
 "Pride & Prejudice" • \$36.98* • SKU: 18292501
 "Surrogates" • \$29.99* • SKU: 9679826
 "The Incredible Hulk" • \$26.98* • SKU: 18315728
 "The Mummy" • \$26.98* • SKU: 18315928
 "The Mummy Returns" • \$26.98* • SKU: 18315973
 "The Mummy: Tomb Of The Dragon Emperor" • \$26.98* • SKU: 18315773
 "Whip It" • \$29.99* • SKU: 9695214

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Post Grad

Rating: PG-13 • Format: Blu-ray Disc



Invention Of Lying

Rating: PG-13 • Format: Blu-ray Disc



Whip It


Rating: PG-13 • Format: Blu-ray Disc



FirstGlimpse

Which Gaming System Is Best For You?

Game consoles and portable devices are no longer limited to gameplay. They can also access the Internet, download media, and play your favorite DVDs or CDs. To help you find a gaming device that will suit you well, here's a comparison of the most popular selections you can find at your local CE retailer.

		Hard drive size	Compatible memory cards	Optical drive	Video resolution output	Ports
What It Means		How much data the system can hold	Cards that will let you save and off-load data, such as game saves or personal media	Aside from game discs, other playable media formats	Highest number of video pixels that are sent to a TV or portable console screen	Hookups for controllers as well as video and audio outputs
Console Devices	 Sony PlayStation 3 Slim (120GB) MSRP: \$299.99* SKU 9476952	120GB 2.5-inch Serial ATA	PlayStation and PlayStation 2 cards with USB memory card adapter (not included)	CD-RW/DVD-RW/BD-RW	1,920 x 1,080	1 Ethernet, 1 A/V, 1 Optical digital audio, 2 USB, 1 HDMI
	 Nintendo Wii MSRP: \$199.99* SKU 8008559	512MB	SD/Nintendo GameCube Memory Card	Can only play game titles	720 x 480	4 controller, 1 Component, 1 Composite, 1 S-Video, 2 USB
	 Microsoft Xbox 360 Arcade MSRP: \$199.99* SKU 9267937	256MB	Xbox 360 Memory Unit	CD-RW, DVD-RW, among others	1,920 x 1,080	1 A/V, 3 USB, 1 Ethernet, 2 memory
Portable Devices	 Nintendo DSi MSRP: \$169.99* SKU 9249725 (blue)	256MB	SD	None	Dual 256 x 192	1 headphone, 1 microphone
	 Nintendo DS Lite MSRP: \$129.99* SKU 8566312	None	None	None	Dual 256 x 192	1 headphone, 1 microphone
	 Sony PlayStation PSP go MSRP: \$249.99* SKU 9459659	16GB flash memory	Memory Stick Micro	None; download to internal and removable memory only	480 x 272	1 USB, 1 headphone
	 Sony PlayStation Portable 3000 MSRP: \$169.99* SKU 9175082	64MB	Memory Stick Duo/Memory Stick Pro Duo	UMD (Universal Media Disc)	480 x 272	1 video out/headset, 1 USB, 1 DC out

*Prices listed in this issue are for general reference and may vary from retailer pricing.

	Online community	Wi-Fi access; Media streaming	Parental controls	Compatible game formats	Included accessories & services	Available accessories	Controllers	Perfect for
	Web site membership for downloads, upgrades, and more	Access the Internet without a cable hookup; Send and receive media wirelessly	Help parents decide what content their kids can or cannot access	Game titles that can be played on the game system	Accessories included with the console	Extras that can help enhance your gameplay	Included controllers; wired/wireless controller compatibility	Who can benefit from the special features the gaming system offers
	Yes, free PlayStation Network membership	Yes, 802.11b/g; Yes	Included; Options available for PS3 games on PS Network, BDs, DVDs, and Internet	Sony PlayStation 3 titles and select PlayStation titles	DualShock 3 wireless controller, USB cable, PlayStation Network membership	Blu-ray remote, Bluetooth headset, memory card adapter, wireless keypad	Includes 1 DualShock 3 wireless controller; wireless	Someone who wants the value of a full gaming system with a BD player and media streaming
	Yes, various paid and free Wii Channels are available	Yes, 802.11b/g; Yes	Included; Options available for Wii titles, online features and downloads, and more	Nintendo GameCube and Wii titles	Wii remote and nunchuck, sensor bar, Wii Sports, console stand, A/V cable, adapter	Wireless Wii remote, wheel, and classic (wired) controllers; wireless sensor bar	Includes 1 wireless Wii remote and nunchuck; Both (some titles require a wired remote)	Gamers of any age who want a unique wireless gaming experience that requires little gaming knowledge
	Includes free Silver membership to Xbox Live	Yes, 802.11a/b/g; Yes	Included	All Xbox 360 games	Wireless controller, standard-definition A/V cable	Headset, network cable, HDMI cable, Xbox 360 hard drive, universal media remote	Includes 1 wireless controller; wireless	People looking for a console that can play games and also stream digital media from MP3 players and computers
	DSiWare (DSi online store)	Yes, 802.11; Yes	Included; Available for Nintendo DSi content	Nintendo DSi and Nintendo DS titles	AC adapter, 2 styli	Audio headset, battery power pack, screen protectors, carrying cases, styli	N/A	Users who want a handheld gaming system that lets them take, personalize, and share photos
	Yes, free Nintendo Wi-Fi connection	Yes, 802.11b; No	Not included	Nintendo DS and Game Boy Advance titles	AC adapter, cartridge slot cover, stylus	Cases, AC adapter, headphones with microphone, styli, cartridge case	N/A	Anyone who will appreciate dual touchscreens and voice-controlled gaming
	Yes, PlayStation Network	Yes, 802.11b; Yes	Included	Available via downloads from PlayStation store	AC adapter, USB cable, Media Go software, Rock Band Unplugged Lite voucher	Protective screen film, cradle, headphones, memory cards, cases	N/A	Those who need a bigger screen for their gaming, Internet, and media entertainment
	Yes, free PlayStation Network membership	Yes, 802.11b; No	Included; Options available for UMDs, Internet, and video downloads	PlayStation Portable titles	AC adapter, AC power cord, battery pack, video rental through PlayStation Network	Battery charger, travel case, memory cards, A/V cable, AC adapter, car adapter	N/A	Those who want to enjoy gaming as well as movies, photos, and music when they're on the go

NOTEWORTHY

Accessories & Services

The gaming experience goes beyond the game itself—you need the right console peripherals and the best just-in-case services. We've compiled a list of some of the must-have accessories that will only enhance your gameplay, so be sure to remember these items on the next trip to your local CE retailer. **FC**



RACING WHEELS

- A gaming steering wheel puts you in the driver's seat of a virtual race
- A comfortable, accurate wheel should give you more control with turns, braking, and acceleration
- Be sure to purchase a racing wheel that's compatible with your specific gaming console



USB DEVICES

- A USB media hub will let you connect other USB devices (including MP3 players and portable gaming devices) to your game console
- Use a USB rechargeable battery pack to charge the Li-Ion battery for guitar controllers



GAMING KEYBOARD

- Adding a keyboard can help game efficiency—type in text codes and chat with other players quickly
- Look for a model with a touchpad so you can easily scroll around the game display
- Models that offer hot keys will enable you to quickly perform gaming tasks, such as gameplay actions



MUSIC CONTROLLER ACCESSORIES

- Add a heavy-duty bass pedal to your gaming drum set to replace your standard pedal
- A tripod microphone stand will make your song-based games more true-to-life
- Extra cymbals for your rock drum kit will give you more freedom to express musical ability



EXTERNAL MEMORY

- External hard drives, USB drives, or memory cards back up your in-progress games
- When additional memory is connected to live (on-line) games, you can save gaming content and downloads
- The more memory you have, the more games and downloads you'll be able to store



WIRELESS CONTROLLER

- Bluetooth technology lets you play while also having the freedom to move around
- Some controllers use traditional AAA batteries to sustain your playing time
- Find the best design for your grip: ergonomic or traditional



HEADSETS

- Use a hands-free headset to enhance your gaming experience by planning strategies aloud with your team
- A Bluetooth 2.0 headset is designed to communicate with your gaming console; Bluetooth headsets will be compatible with most game consoles
- Consider noise-canceling headsets with echo-minimizing microphones so you can hear and be heard clearly



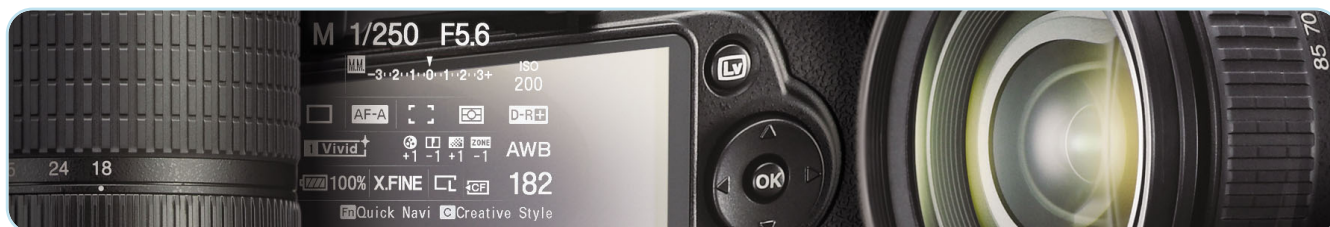
GAMING SERVICES

Your local CE retailer provides some helpful services, both in-home and in-store, to enhance your gaming console. Specifically, the professionals can set up online connections, install system updates, and transfer data to a gaming storage device.

- Online account configuration
- Console system updates
- Stream media from a PC to a gaming console
- Connect a console to a home-theater center

D-SLRs

THAT CAN RECORD HD VIDEO



Unlike their point-and-shoot counterparts, D-SLR (digital single-lens reflex) cameras allow photographers full control over their photo results, helping them snap high-quality shots thanks to advanced camera features, such as larger image sensors and interchangeable lenses.

In addition to taking images with true-to-life color and clarity, some D-SLRs have added another advanced technology to the mix with the capability to record high-definition video. Sometimes called HD-SLRs, these cameras have progressed to include the same HD movie mode that's become popular on some digital point-and-shoot cameras.

The Best Of Both Worlds

A D-SLR with the hybrid ability to shoot photos and HD video gives you more options to capture special moments than ever before. You can take dozens of photos at your son's 10th birthday party, but to really capture the excitement, with the press of a

button, you can easily switch your D-SLR to video mode and record the action when your son tears into his gifts with excitement.

Recording HD video with a D-SLR isn't a complicated operation. Most D-SLRs feature a mode dial that you can rotate to select a specific camera setting, such as auto, manual, playback, or video. Oftentimes, a D-SLR's video mode is denoted on the dial as a camcorder icon. Simply turn the camera's dial to the video mode and press down the shutter release (the button you use to snap photos) to instantly start recording video in HD.

D-SLRs with HD capabilities can record in either 720p or 1080p video resolutions. The difference between 720p and 1080p is the number of horizontal lines of pixels that are used to create a single frame of video, so a camera that can record in 1080p films video that's more detailed than a camera with a 720p resolution. The "p" indicates that the video is captured in progressive scan, and that means that all 720 or 1,080 lines of video are captured all at once, rather than every other frame. The result is a clearer picture. Many camera

models allow you to configure specific video settings, such as selecting an HD resolution (if possible) and enabling or disabling audio recording via a video settings menu.

Just like the photos you shoot on a regular D-SLR, an HD-SLR's video is recorded onto a memory card that's inserted in the camera. The type of memory card you use depends on your camera's model, but many HD-SLRs use high-capacity cards, such as SDHC, that read and write data faster than other memory card types. Because HD videos can take up a lot of storage space on a memory card, you'll need to purchase a memory card that's large enough to store your recordings. A 16GB memory card can store approximately 50 minutes of 1080p HD video or one hour and 15 minutes of video in 720p.

Create High-Definition Memories

Unlike camcorders, the lens on a D-SLR can be replaced with a variety of lenses that can help you achieve different results in your recordings. Equipping your HD-SLR with a macro lens will enable you to take up-close videos of your cat's

new litter of kittens and create a greater depth of field (how much of the background blurs in order to make your subject stand out). Using a telephoto lens gives you zooming capabilities that most digital camcorders don't have, so you can stand back and record the antics of the animals at your local nature reserve from a distance, without disrupting them.

Once you've snapped shots and recorded high-definition video memories, you have a couple of options to immediately play back your raw footage. Many D-SLRs with HD recording capabilities can be connected directly to

your HDTV with a mini-HDMI cable or your computer.

If you're feeling creative, you can connect your camera to your computer via the included USB cable and edit your HD videos with video-editing software to create fun home videos that tie all of your movie clips together. Most video-editing software lets you add transitions, such as dissolving between movie clips, helping you create a professional, polished feel. Depending on which video-editing software you use, other options may include adding video titles, music, and sound effects. Once you've created a

home movie, you can burn your project to a DVD or BD to share with family and friends. You can also share your HD footage with others by uploading your videos to an HD-supported Web site, such as YouTube.

Pictures Plus Videos

D-SLRs with HD video-recording capabilities give you the ability to take stunning still photos and instantly switch modes to shoot crisp HD video, so you can capture every moment in a memorable way. **FG**

BY KRIS BRAMBILA

Nikon's D5000 D-SLR

For those who want a D-SLR that can pull double duty capturing both still images and HD videos with sound, Nikon's D5000 (\$749.95; www.nikon.com) can get the job done. With a 12.3MP image sensor, you'll not only create detailed and colorful images, but you'll also be able to shoot 720p video at 24 frames per second with D-Movie Mode.

Shooting video is easy because the Nikon D5000 has a 2.7-inch Vari-angle LCD that swivels up and down to give you a variety of shooting angles. Hold the D5000 above your head in a crowd and use the LCD to frame a video of a rock concert's opening act. The Vari-angle screen makes shooting video more convenient because you can see exactly what you're recording without having to put your eye up to the viewfinder. ●



Nikon D5000 D-SLR | \$749.95 | www.nikon.com

Keep Your New Year's Resolutions

It's easy to start the year off with the intention of meeting your newly set resolutions, which might include getting in shape, saving money, trying to stay organized, and more. But the hard part is actually keeping them. Here are some CE devices available at Best Buy (www.bestbuy.com) that might be able to help.



● Brother PT-2100 Labeling System

Start the year off right by organizing everything with labels. **\$69.99**



● Livescribe Pulse Smartpen

Keep up on work or homework with a pen that does double-duty: takes notes and records audio. **\$199.99**

● Garmin Forerunner 405

Track your workouts, heart rate, and number of calories burned as you get back into shape. **\$349.99**



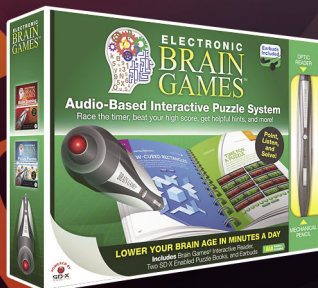
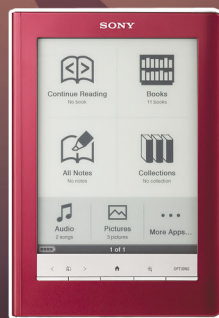
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